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THE TURKISH OR HOT-AIR BATH:

ITS USE IN THE ECONOMICAL ADMINISTRATION OF MEDICAL RELIEF IN HOSPITALS, DISPENSARIES, WORKHOUSES, LUNATIC ASYLUMS, JAILS, AND REFORMATORIES.

BY

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MR. PRESIDENT AND GENTLEMEN,—I presume I need not apologise for bringing before your notice the advantages of the Turkish bath. Within the last two or three years this description of baths has been brought to the attention of the public, by the erection of them in several towns in England, and especially in Ireland, and by the publication of several pamphlets; yet the knowledge of the peculiar construction and advantages of this bath seems very limited, and in many instances there is a strong current of prejudice against its use. This ignorance and prejudice are not confined to the general public, but extend even to the medical profession, which should be cautious, no doubt, in giving its adhesion to any theory or practice not based on reason or experience. With the view to neutralise prejudice, and to enforce the due consideration of the bath on the minds of the profession and the public, I have ventured to solicit your attention, believing that the therapeutic advantages of the hot-air bath are very important, and that it will be found so valuable an auxiliary in the treatment of disease, that in future every public institution for the promotion of health or the cure of disease will be furnished with it, as a necessary appendage. It is chiefly my wish to direct the attention of the medical officers and the governors of hospitals, dispensaries, workhouses, reformatories, and jails, to this subject, with the conviction that they will recognise its utility, and adopt it as an essential part of every public building. And on this occasion I have no intention to enter upon the larger subject of baths in general, such as cold water or warm water baths; I intend to limit my observations to the hot-air baths, whether used for purposes of cleanliness or as a means of preventing and curing disease. I need scarcely mention that this species of bath is not new, though comparatively so in this country. The Turks and other eastern nations have used it for several hundred years, and they borrowed the practice from their ancestors, the Romans and the Greeks, who had previously adopted it for many centuries. Magnificent buildings have been erected for the purpose in Greece and Rome; the ruins of the baths which now exist in Rome, and which I have repeatedly visited, fill the mind with astonishment. I have contemplated these gigantic ruins with emotions of profound admiration, since they prove how much the Romans regarded the health and happiness of the people; and surely the humane principle which actuated the rulers, whether Roman or eastern, should also actuate a Christian and benevolent people to provide so great a boon and so great a want for the benefit of the poorer classes. They are proud monuments of their care for the welfare of the people. The great physicians of old, Hippocrates, Celsus, and Galen, have treated upon the value of the bath, and extolled it as necessary to health. The efficacy of the bath is, therefore, attested by the experience of ages, as calculated to do much good, both in preventing and curing disease, as well as for the purposes of cleanliness and refreshment. No doubt in all ages ablutions have been deemed essential, whether for cleanliness, or removal of disease, or as a part of religious duty for purification of the body. The interest which I take in endeavouring to propagate a more extended use of the bath, arises from personal experience. When I had the honour of doing duty in the great military hospital at Scutari, in Turkey, as one of the physicians on the medical staff of the army, I had the misfortune to contract a violent fever, terminating in jaundice and dropsy. In the course of convalescence, after the more acute symptoms had yielded to the skill and remedies, such as bloodletting, mercurials, and cathartics, which my medical friends had prescribed, I was induced to try the Turkish bath. The relief I experienced was extraordinary, and I repeated the bath some dozen times. I may truly say that I owe the preservation of life to its invaluable aid. Afterwards I had frequent recourse to it, in the treatment of my patients, with invariable and striking advantage, in severe forms of disease occurring among the soldiers; in cholera, dysentery, diarrhœa, rheumatism, scurvy, neuralgia, liver, kidney, and skin, as well as other diseases. The first introduction of the hot-air bath in England is due to the efforts and benevolence of Mr. Urquhart, formerly secretary to the Turkish embassy. In his learned and most highly interesting work, *The Pillars of Hercules*, Mr. Urquhart has described the bath in the most graphic manner; it is a work which will amply repay the reader by the erudite and interesting narrative of the customs of eastern people. Mr. Urquhart has built a handsome marble bath in his own house, at Rickmansworth, and I had the pleasure, a month ago, of having a bath, to which he kindly invited me. Great praise is also due to the bold and sagacious enterprise of Dr. Barter of Blarney, by whom the bath has been carried out in Ireland on a scale of grandeur. Dr. Barter has, at great cost, built handsome baths at Bray, Dublin, Cork, Waterford, Killarney, Limerick, and Belfast. These baths have now been in use, more or less, for nearly four years, and have exceeded the most sanguine expectations. Thousands have reaped the benefit of them, and the great fact of their complete efficacy is now established beyond a doubt. I had the pleasure of visiting these baths last year, and can bear testimony to the universal report in their favour which I heard from numerous patients who, in all stages of health and disease, have asserted the efficacy of the hot-air bath. From testimony so diffused and disinterested, the conclusion naturally flows that the bath is a most salutary means of health, and demands the serious consideration of the profession, as a great addition to the resources of the healing art. It will be conceded readily, that the medical profession hails with enlightened liberality and satisfaction any new discovery, or any new mode of application of a known agent, which tends to alleviate suffering and promote health. The profession has, to its honour, discarded all selfish considerations when it has been called upon to reject or adopt any remedy which lays claim to benefit mankind. I will not hesitate to affirm that the day is fast approaching when the benefit of the Turkish bath will be fully recognised as a great fact. Its delay, as a means of cure, in modern Europe, affords another striking proof how slowly and reluctantly known truths are admitted and brought into practical operation. The discovery of the circulation of the blood by Harvey, that of the divine discovery of vaccination by Jenner, the extraordinary powers of steam by Watt, and the wonders of the electric telegraph by Wheatstone, as well as many other proofs of man's ingenuity and sagacity, had struggled for years before they were sufficiently appreciated, and made practically subservient to human wants. It is not necessary, at this time, to compare the relative utility of the warm water and the hot-baths. The difference is considerable; the latter can effect all that the former can, but its influence is far more powerful as a detergent, and as a

therapeutic remedy. Water, at a temperature of 100°, is no doubt a most useful medium to wash the body, and to produce a soothing and relaxing effect in many complaints; but hot air, at a *temperature* from 150° to 170°, *combined* with *shampooing*, has hygiean properties of a peculiar kind in stimulating the circulating, nervous, secretory, and absorbent systems; indeed the operation of the two media is very different, the one rather soothes, the other excites; the one is restricted in its application, the other has most comprehensive powers of action, and differs not so much as to the degree of heat as to the mode of operation.

II. *The Turkish Bath* is essentially a *hot-air bath*, though the admixture of a small amount of humidity renders it more easy and agreeable to bear. Its intention is to produce copious perspiration, while its remedial action is aided by the art of shampooing.

Construction. There are four chambers generally considered necessary in its construction. The first chamber, or *frigidarium*, is a room for undressing, and cooling after the bath; it is of the ordinary temperature of the atmosphere. The second is the *warm* room, or *tepidarium*, elevated to a temperature of 120° Fahrenheit. The third is the *hot* chamber, or *sudatorium*, elevated to 160° or 170°. The fourth, or *lavatorium*, is for the ablutions. The patient enters the first or cool room, the *frigidarium;* here he undresses, and puts on a thin cotton gown, and loose pair of drawers, which tie round the loins, and reach to the knees. His head may be encircled with a towel, made tolerably wet with cold water and wrung out, and then fastened round the head. As the floor of the next room is too hot for his feet, wooden pattens, with a strap over the instep, so as to embrace the foot firmly, are put on, he then enters the second room, or *tepidarium;* the temperature of this room should be from 120° to 130°. The room should be furnished with small windows, which can easily be opened, if necessary to cool it; it should have the means of ventilation, either by a valvular opening at the top or in the sides of the walls; the walls should be made solid with cement or fire-brick. The heat is supplied by means of a strong *furnace* heating an oven which communicates with fire-brick flues, or iron pipes, circulating under the floor and through the sides of the walls. The floors should be made of slabs of fire-brick or tiles, over which a framework of wood, with square openings, somewhat resembling a harrow, should be placed, covering the whole room. This room should be about twelve feet square, provided with solid oak benches around, or strong reclining chairs with cane bottoms. The patient may walk about or sit down; in a quarter of an hour he will begin to perspire; he may now drink freely of cold water—it is better that he should drink one or two tumblers or more. When the attendant feels the surface of the body, and ascertains that it is sufficiently perspirable, he conducts the patient through the door which separates it from the third or hot chamber (*sudatorium*), which is considerably hotter than the preceding. The hot room should be 160° or 170°, and of the same size and shape as the warm room; it should be similarly constructed as to windows and ventilation. It is desirable to have a tube three or four inches in diameter passing through each opposite wall, capable of being shut or closed, so as to let fresh air in if the patient finds the heat too much, and the respiration affected. Two or three large pans of water may be placed in the corners of the room, as a moderate amount of moisture is more pleasant to breathe than air absolutely dry; but there should be no visible vapour. The patient may now remove the loose gown, and fresh damp the head bandage if he find the heat at all oppressive to his head. The patient walks about till the perspiration freely bursts out; he can walk about or sit on the benches, which should be covered with a thin horse-hair squab. After a quarter of an hour or more, dependant upon constitutional temperament, he may lie down on the *shampooing* table, made of thick solid oak, covered with a thin horse-hair squab, his head resting on a horse-hair pillow, or sit down on a chair, if he prefer it. The shampooer now rubs him down, at first gently and afterwards with more force, pressing his hands in the direction of the main blood-vessels of the limbs, so as to assist the circulation towards the heart. He will then compress the abdomen and back, and use friction in such a way as to be brisk without being rough, and in proportion as he finds the patient can bear it. He will continue the kneading, compressing, and friction, for twenty minutes or half an hour, or even longer if the patient likes it. The patient, after having been duly shampooed, may return through the second room to the fourth room (*lavatorium*) or ablution chamber which adjoins it, where he is well washed with soap from head to foot, bowls of warm water are thrown over him, and the soap and the secretions of the skin are all washed away. After this, he may, or may not, have recourse to a gentle shower-bath or a dash from a small jet of cold water. The washing room should be supplied with hot and cold water, with cane-bottomed chairs, and should be eight or ten feet in length and breadth, and of the ordinary temperature of the atmosphere. This room should adjoin either the first or second room, as may be most convenient in the construction of the building. The effect of the cold water shower or dash is generally pleasant and refreshing; it may be omitted if the patient dislikes it, but usually it is a much better and safer plan to play freely on the body, especially the spine, with the cold water. The body having been heated to a high degree, the exalted power of the nervous system enables it to resist the shock of cold. It is the reactive effect of cold which is so eminently beneficial; it nips up the pores of the skin, prevents undue relaxation, and checks excess of perspiration. The patient is now wiped dry, and puts on a gown moderately warmed, and walks back to his dressing room. By the time he reaches it, perspiration will break out more or less; he will then again rub himself dry, and lie down on a couch, or walk about, till he gradually cools; this takes ten minutes; he then dresses himself, and leaves his chamber. He retires to the buffet, where he takes a glass of sherbet or a cup of coffee, and pipe or cigar, and finds himself delightfully refreshed. Mr. Urquhart's description is so graphic that I venture to transcribe it:—"The body has come forth shining like alabaster, fragrant as the cistus, sleek as satin, soft as velvet; the touch of the skin is electric."

III. *The Power to Sustain Heat and Cold.* To an audience composed of the members of the British Medical Association, I need not enter on the anatomy and physiology of the skin. There are, however, some general facts in relation to the capability of the skin to sustain heat and cold which deserve notice, as they bear upon the application of the Turkish bath. The power of enduring great extremes of heat and cold is a wonderful provision of our nature, by which the constitution is prepared to support the vicissitudes of climates, and to protect man from the intense cold of the arctic regions, as well as the solar heat of the tropics. At the temperature of 96° Fahrenheit, the blood maintains the vital powers in a normal state, nor is that temperature materially altered under the widest range of extreme heat and cold from the equator to the poles.

In the arctic regions, the greatest degree of cold ever known was that recorded by Captain Sir William Parry, in February 1818, at Melville Island, when the spirit thermometer sank to 54° below zero; and that more recently recorded by Captain Sir William McClintock, in the expedition of the *Fox*, when the thermometer fell to 48° below zero. In these instances of severe cold, only one man perished, who was found dead in his cabin. On the other hand, the human constitution is capable of supporting great degrees of heat. I once entered the apartment of Mons. Chabert, a French experimentalist, in company with my late esteemed friend, Mr. Bransby Cooper, surgeon of Guy's Hospital, when the thermometer stood at 212°, boiling point, at the further end of the room. We did not suffer any considerable inconvenience, as the most profuse perspiration broke out the moment we entered the chamber. The experiments of Sir Charles Blagden, Fordyce, and others, prove to what a degree of artificial heat we may be subjected without permanent injury or inconvenience, for they endured heat of 240° for several minutes. There are numerous occupations of life where men sustain high temperature with comparative ease. Men engaged in sugar-bakeries, in the potteries, in the iron and glass works, in the mint where gold is melted, bear intense heat with impunity. The shampooers of Turkey are accustomed to heat of 160° for many years of their lives; they begin their vocation as boys, and live often to old age, in health and strength, living chiefly on coffee, vegetable food, and smoking all day.

The capability of bearing great heat, therefore, proves the groundlessness of those fears which some entertain with respect to the Turkish bath. At a temperature of 110° or 120° the skin will be in a perspirable state, at 160° or 170° the perspiration becomes copious, and streams down from head to foot; this at once relieves the sense of momentary oppression of the breathing; the respiration becoming free, shows the reciprocal action of the cutaneous and pulmonic organs.

I do not recommend the hot-air bath in antagonism to the cold water-cure; that is a subject for a separate consideration and inquiry. To persons in health, capable of a genial reaction, there can be no doubt that cold water is both pleasant

and tonic; but to invalids in general, especially those of feeble powers of reaction, whose lips and extremities turn blue from the sedative effect of cold, I know nothing more repulsive and so dangerous as cold, nor anything so tedious and clumsy a process as "*packing*". I am not, however, attempting to contrast them, nor to point out the claims of each mode of operation on the human system as means of cure.

IV. *Theory of the Action of Hot-air.* Independently of its remedial action, this mode of washing and cleansing the skin is most effectual. It removes the dust and dirt embedded in the pores, as well as the oily matter from the sebaceous follicles, and the scurf or epidermis which is detached by shampooing. The shampooer collects it in his hand, and exultingly shows it as a proof of his skill. The beneficial effect of *sudorification*, in the cure of disease, is partly due to the elimination of the secretions of the skin, but chiefly, I apprehend, to the *combined impetus* given *by heat and shampooing* to the nervous, vascular, secretory, and absorbent systems. To supply the waste of the fluids by the skin, the cutaneous blood-vessels make a demand on the deeper seated vessels, and in their turn these act on the large internal main trunks, the thoracic, abdominal, and cerebral vessels, which are roused into a more rapid circulation. The secretory glands and membranes are thus brought to a vigorous condition. Hence the chief efficiency of the hot-air bath arises from its power to aid normal functions in a high degree, especially in chronic diseases, in languid, lymphatic, and bilious temperaments, in cases of morbid secretions, in all cachectic diseases, whether superficial or more deep seated. The exalted condition of the circulating, nervous, and lymphatic systems, induced by heat and friction augments the *vital force*; the vital force thus relieves obstructions, promotes secretion and absorption, and restores the organs to a normal condition, and is the true "*vis medicatrix naturæ*". This, I apprehend, is the legitimate solution of the *ratio medendi* of the hot-air bath; its primary action is on the surface, its subsequent action on the deeper tissues of the body. The sympathy and harmony of the cutaneous with every other organ is abundantly manifested, both in healthy and morbid associations. A fit of ague blanches the skin, and makes it shiver and contract; a fit of rage flushes the cheeks, and stops the breath; a fit of indigestion, or an attack of diarrhœa, will make the skin cold as marble. The instances are numberless of the reciprocal sympathies of the skin with the brain, the heart, lungs, stomach, and every organ of the body, and with muscular action, as in spasms and tetanus. The sympathies are not confined to physical, but extend equally to mental and moral influences, and are both direct and reflex. The observant physician perceives in a moment the crimson flush of fever, the damask flush of hectic, the yellow hues of bile, the green tint of chlorosis, the sallowness of carcinoma, the bronze of fatal capsular disease of the kidney, the blue of cyanosis; the complexion of the skin is stamped with unerring certainty by inward disease. Thus the universality of the mutual organic relations of the body with the skin is manifest, and the deduction may fairly be drawn of the importance of the hot-air bath in the treatment of internal disease. We have long been too unmindful of the skin in our pathological and therapeutical indications. We have been carried away too much, in the treatment of disease, by the Abernethian and Hamiltonian doctrines to an exclusive attention to alvine excretions, and the renal school of the late lamented and illustrious Bright has too much absorbed our thoughts. Many of our social habits conduce to a tendency to morbid secretions, to abnormal deposits of fibrine and albumen, to adipose, atheromatous, osseous, and malignant *materies morbi*. Whatever view we take of the development of disease, we shall find the Turkish bath calculated to hold in check, if not to arrest, the progress of morbid action. In the consideration of the *modus operandi* of combined heat and shampooing, we should not overlook the activity of the absorbents; they are the capillary scavengers to sweep away refuse matter, when mercury and iodine have failed to accomplish those ends. The shampooer is all bone and muscle; he has a wiry look; superfluous fat melts under the sweat of his arm.

V. *Diseases to which the Bath may be applied.* Of all the numerous complaints to which the hot-air bath is eminently serviceable may be mentioned those which are of long standing, called *chronic*. There are no maladies which assume such protean types as those of the skin; their number is legion. Some have estimated them as consisting of five or six hundred varieties. The majority of these affections will yield to the sanative effect of the hot-air bath alone, though many, no doubt, require the aid of sulphur, mercury, arsenic, iodine, sarsaparilla, antimony, etc., as invaluable internal remedies. Cachectic diseases, such as scrofula and secondary syphilis, consumption in its early stage, malarious fevers, remittent and intermittent, biliary derangements, gouty and rheumatic diatheses, dyspeptic and renal disease, especially Bright's, and diabetes, neuralgia, hysteria, and many nervous and spasmodic complaints, as epilepsy, etc.; hypochondriasis, paralytic affections, lameness, contracted joints, fatty degenerations particularly, dropsies; uterine diseases, as amenorrhœa, dysmenorrhœa, and leucorrhœa, cholera, diarrhœa, and dysentery, influenza, catarrh, bronchitis, diphtheria, and numerous others, which make up a long catalogue of maladies which are benefited or cured by the use of the Turkish bath. It must be left to the discrimination of the physician to select the diseases, or the varying conditions of the disease, when the patient is subjected to the bath. It must not be expected that the bath has miraculous properties. It will fail, of course, to answer the expectations of the unreasonable and over sanguine, and must be repeated, probably, many times to insure its efficacy. It is contra-indicated in several forms of disease, especially those of an hæmorrhagic or sanguineous tendency, and cardiac disease generally, as well as those that show too much determination of blood to the head. But a very little reflection is sufficient to guard an intelligent practitiener from an incautious or indiscriminate use of a remedy so powerful as the hot-air bath.

VI. *Economical Administration of the Bath.* In the previous pages, I have endeavoured briefly to show that the Turkish bath is capable of curing numerous diseases, and that its more frequent adoption would necessarily diminish the too constant recourse to drugs. No one admits more readily than I do the value of the *Materia Medica* and *Pharmacopœia*, and that they contain remedies of the highest value, founded on experience which cannot be shaken nor doubted. It is, notwithstanding, proper to have a regard to economy, in the administration of the funds of hospitals, and dispensaries, and workhouses. The cost of drugs is considerable, and in some hospitals large sums are expended which might be saved, which benefit only the druggist; and as our public medical institutions chiefly depend for their support on the bounty of the public, it is necessary to curtail expenditure where it can be done. If we examine the properties of drugs, and limit their number to those which experience has ascertained to be valuable, I think it will be admitted that we have scarcely twenty in which we can place much real reliance. In the discharge of our duties to the poor, physicians have been tempted to yield to the popular demand for drugs, as the only tangible means of cure, and there are many patients who are never happy except when they are regaling themselves with cathartics and diuretics, stimulants and tonics. If the rich wish to enjoy such luxuries, they are as much entitled to them as to ices and champagne, for which they must pay. I believe an extended use of means, other than drugs, will be of far more importance in the cure of many diseases. I believe that the use of baths, with shampooing and moderate gymnastics, will give relief to many classes of disease which it has been the ordinary routine of practice to attempt by a sole dependance on drugs. I may mention that the open state of the pores of the skin by heat renders that surface a convenient medium for introducing certain medicines by what is called the *hypodermic* mode. Mercury has long been rubbed into the system, and its medicinal effects are the same as when orally administered. Iodine, belladonna, morphia, arsenic, and antimony might be introduced in the same way, either topically or generally, and thus leave the functions of the stomach, undisturbed, to do its own duty of digesting food. To the writings of many physicians and others we ought to feel grateful for reviving an ancient practice. To none more than to Mr. Urquhart, and also to Mr. Beamish of Cheltenham, who have published excellent works on the subject; also to the writings of Sir John Fife, surgeon to the hospital at Newcastle, to Dr. Haughton, Dr. Barter, Dr. Cumming of Cork, Dr. Tucker of Sligo. The writings of Mr. Urquhart, especially, are singularly interesting in elucidating the practice of bathing, and the curious customs of eastern nations. More than a hundred baths have been erected in England, at a cost from £100 to £500. Three are in Cheltenham, and lately the Marchioness of Conyngham has built an elegant bath near Canterbury.

I have now briefly endeavoured to explain the subject of the "Turkish bath"—to show its construction—to indicate its *modus operandi*—and point out the diseases to which it is chiefly available, as well as its economy in hospital practice. I hope I may induce others to follow up, practically, my ideas in the construction of the bath; and if every physician con-

tributed something to the common stock of information, this meeting will not have congregated in vain. The British Medical Association may be the instrument of disseminating a valuable mode of curing disease, and thus give proof of its utility as an association, by adding a powerful remedy to our *Materia Medica*, and enlarging the number of all those means and appliances the great object of which is the welfare of mankind, in the alleviation of human suffering, and the extension of longevity.

Clinical Lecture

DELIVERED AT

KING'S COLLEGE HOSPITAL,

OCTOBER 13TH, 1860.

BY

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Introductory: with some Remarks on the Statements made in a recent Review of Dr. Todd's work "On the Treatment of Acute Disease."

GENTLEMEN,—As this is the first Clinical Lecture which I am called upon to deliver this session, I propose in the first place to call your attention to one or two general points connected with clinical observation and the treatment of disease, and afterwards to allude briefly to the cases in the Hospital under my care. You are probably all aware that only a small number of patients are allotted to me; but you must not therefore conclude that little is to be learned by watching them from day to day. Depend upon it, you will gain more real information by carefully studying one case thoroughly than by subjecting a great number to cursory examination. My class is, as you know, a voluntary one, and meets at nine o'clock. As the cases are limited, we shall have time to go into matters of detail with reference to diagnosis, which are not less interesting than important.

You will, I think, find by and bye, that the degree of confidence you yourselves feel as to having pursued the right plan of treatment in a case, will be much influenced by the confidence you feel in having made a correct diagnosis. When inquiring into the nature of a case, do not try to find a name for the disease, and then ask yourself what physic is good for it; for if you pursue this course, you will never gain that sound judgment and discretion which alone will give you confidence in yourself, and enable you to gain the confidence of those who consult you.

When you examine a patient, try to make out everything in which he differs from a healthy man; and, if possible, ascertain the causes of the difference. See if his heart, and lungs, and liver, and intestinal canal, and skin, and kidneys, act as they should do in health; and ascertain if his muscular and nervous organs perform their offices properly. Make these inquiries in a definite order, and arrange the information you receive according to a well considered plan.

I shall endeavour to assist you in every way that I am able; and we shall from time to time go through the detail of taking a case, in order that you may have an opportunity of seeing the practical use of an artificial method, the object of which is to prevent us from omitting some important points which might be passed over if our inquiries were not made in a methodical order.

With regard to the subject of treatment, let me warn you against accepting this or that plan as the right one, because it is stated that a small per centage of deaths or a large per centage of recoveries is recorded in its favour. If you observe the cases which come under notice in the wards, you will seldom find two which exactly resemble each other in their origin, course, and results. We all possess certain individual peculiarities, require different quantities of food, are influenced differently by the same causes, and, although we may be exposed to the same conditions, we shall not all be affected in the same way. It does not follow that, because we may be suffering from a similar disorder, we shall therefore progress favourably under precisely the same treatment. One will be weaker or stronger than another; certain organs will be more affected in one person than in others. Of a number of persons who have lived too freely, and under nearly similar circumstances, for the same number of years, you will find that some live to a good old age; others die early, of some acute disease; many get kidney-disease; some die of a contracted and wasted liver; some lose their nutrition, and get pulmonary affections; others get diseased arteries, and die of aneurism or heart-disease, or of apoplexy resulting from softening of the brain, or of general paralysis. All these conditions, and many others, may result from one cause acting differently in different individuals. Now, there is no one plan of treatment which can be laid down as suitable for every case you may meet with of any particular malady.

It will be more useful to examine most carefully into the nature of all these changes, to consider the circumstances which give rise to them, how they may be retarded, and how life may be prolonged if the organic changes are past reparation, than to hunt out of books a certain number of cases of fever, or bronchitis, or disease of the kidney, tabulate them according to the treatment employed, and use the results you obtain for your future guidance in practice. This last, gentlemen, is not, I need scarcely tell you, the way to make yourselves honest, unprejudiced practitioners, capable of acting with sound judgment in emergencies that will arise. You must observe for yourselves the changes which take place in the patients you see and watch from day to day in the hospital; and you must think how you can influence those changes by altering the conditions under which life is carried on. You must study the influence of heat and cold, diet, and the various plans of treatment at our disposal, upon the healthy organism, and upon persons whose healthy actions are more or less deranged.

And now I must notice some erroneous conclusions, founded upon data which I shall show you are incorrect, that have been lately put forth by an anonymous reviewer, with reference to the results of the treatment pursued by the late Dr. Todd in cases of fever and in other cases of acute disease. I will not allow these numerical statements to go forth to the profession without saying a few words in explanation of the results which have been obtained; and I feel that there is no place in which it would be so appropriate to offer these remarks as this theatre, in the presence of some who, with better opportunities of observing the actual effects of the treatment than the reviewer seems to have had, have watched from day to day the course of many of the cases under Dr. Todd's care.

Anonymous reviewers who commence their observations with expressions of the peculiar sense of responsibility which attaches to their remarks, and proclaim their high respect for the opinions of those with whom they are most reluctantly compelled to differ in every essential point, are perhaps peculiarly liable to imagine that certain statements which really emanate from themselves, and which they proceed straightway to refute by every possible argument, are articles of general belief. These assertions, often quite unimportant in themselves, by a little skilful handling on the part of the reviewer, are at last made to assume proportions sufficiently large to render it worth his while to attempt to demolish them.

It is much to be regretted that this sort of verbose assertion, invented apparently for the mere purpose of subsequent contradiction, often forms a considerable part of what is known as a "review"; and there are not a few critics who seem to think it necessary at least to commence in this manner. In many of our journals, articles are admitted in which satire is made to take the place of argument, and sharp writing fills up pages which should be occupied by honest analysis and temperate examination. As long as this fashion lasts, we cannot attach much importance to the opinions advanced, or feel confidence in the truth of the facts appealed to by these anonymous writers. Surely an important question of treatment might be fairly discussed by one who was opposed to it, without the necessity for such remarks as "that it has been contended by many of Dr. Todd's disciples that he was the originator of a new system of medicine"; and that "the writer has even heard it stated on more than one occasion that Dr. Todd's views on treatment were more than a century in advance of the age in which he lived." (*Medico-Chirurgical Review*, No. LI, Oct. 1860, p. 325.) Had the author known Dr. Todd, he would have been aware that he frequently referred to those who had employed with success a similar plan of treatment before he commenced practice, and to many of his contemporaries who had been led to

the same practice from independent observation, and from their own private experience. Dr. Todd acted upon this plan, as he would have acted upon any other, because he had obtained sufficient evidence to convince himself that it was right. Why too, I would ask, should a writer who has been called upon to review an important work, go far out of his way to annoy his readers by offering what almost amounts to an indirect insult to two distinguished physicians who are not in any way connected with the question at issue?

But, gentlemen, we must not pursue this part of the question further. We may hope that the time is not far distant when medical literature will no longer be degraded with this sort of writing; and I trust you will all uphold, on every opportunity, the propriety of discussing difficult questions freely and earnestly, but calmly and dispassionately, and show that you are not influenced by those who enforce an argument by sarcasm and ridicule, when reasoning fails to convince, and facts are on the opposite side.

The author of this review in one single sentence contradicts observations based upon careful work, accumulated with anxious care, and confirmed by the statements of several independent witnesses. He sets at nought observations in clinical wards spread over a period of thirty years, and proceeds to deny the truth of the facts upon which a great clinical teacher founded the principles which he taught for nearly a quarter of a century,—principles which have been practically acted upon, and the truth of which has been confirmed in the course of a most active professional career. And if the statements of this reviewer be received, the conclusion is forced upon us, that Dr. Todd was totally deceived in the results of his practice, misled by his observations, mistaken in his views, and prejudiced in favour of a doctrine which was not supported by facts; or we must accept another alternative which is only ungenerously hinted at, because it is well known to be contradicted by facts, and to be inconsistent with what is known of Dr. Todd's whole career.

I would ask, was it likely that a man who considered himself to be, and worked till the last at his profession, as a student, was so utterly mistaken in his views, and so completely deceived in the results of his treatment, and wrong in his judgment, as this reviewer concludes? Were those house physicians, and clinical clerks and students, who watched during a period of more than twenty years his practice in this Hospital, and the practitioners in this country who act upon principles similar to those on which he based his practice,—are all these, and they must number many hundreds of some of the most inquiring minds in our profession, so utterly mistaken in their impressions, *that a quick weak pulse becomes slower amd stronger under the influence of alcohol; and that delirium increases as a patient's strength fails, and diminishes when his strength is upheld?* Is it likely that these phenomena, which could be observed again and again by any unprejudiced person who worked for six months in the wards, were in reality merely due, as the reviewer suggests, to the accidents of the malady, and not to the influence of the alcohol? Did the large quantities of alcohol which many of these patients took exert no effect whatever on the pulse?

This gentleman comments on Dr. Todd's conclusions thus: "We have no hesitation in declaring, as the result of considerable investigations into this subject, that the rate of mortality of Dr. Todd's fever cases was much in excess of any other hospital in the United Kingdom?" If this were all, it would not have been necessary to notice the review, as the experience of most readers would prevent them from giving implicit credit to a general statement of this kind, made anonymously. But, armed with the formidable artillery of numbers, he produces facts in support of his assertions which few would be inclined to contradict; and he draws conclusions from the facts which the ordinary reader would not fail to accept. He says that, "about a year before his death, Dr. Todd handed over to him his case-books from the year 1840 to the year 1858, for the express purpose of analysing the results of his treatment."

It is unfortunate that these books should have fallen into the hands of one so well able to analyse, and so unfortunate in his efforts to extract the truth. After making a most laborious analysis, he makes out that the deaths of *typhus, typhoid, and relapsing fever, amounted to* 18·29 *per cent., while in other hospitals the mortality never exceeded* 14 *per cent. The deaths of Dr. Todd's cases of typhus fever reached* 26 *per cent.* Now, I shall have no difficulty in showing you that all this calculation has been worse than useless, because it has caused the reviewer to propagate a most unpardonable error. His analytical work doubtless is right; but his conclusions are utterly wrong, for the simple reason that the facts upon which his calculations were based are incomplete. He *assumes*, what he ought to have ascertained before he began his inquiry, that the case-books he analysed contained reports of *all* the fever cases admitted under Dr. Todd in the above mentioned period. It is hardly credible that so simple a point was not at once determined by questioning those who were familiar with the manner in which the cases were recorded.

[*To be concluded next week.*]

Original Communications.

TEN YEARS OF OPERATIVE SURGERY IN THE PROVINCES.

By Augustin Prichard, Esq., Surgeon, Clifton, Bristol.

II.—Operations on the Abdomen and Lower Intestine.

The second subdivision of my cases includes operations upon the abdomen and the lower part of the alimentary canal; that is, hernia of various kinds, tapping the abdomen, and operations for fistula *in ano*, hemorrhoids, and fissure of the anus.

Hernia. In narrating the cases of strangulated hernia requiring operation, I shall arrange them according to their kind, namely, femoral, inguinal, and umbilical; describing under each head, first the successful, and then the fatal cases. Of the large majority of cases which were reduced by the taxis, I have no note. A few instances of the operation for the radical cure will be added afterwards.

Femoral Hernia. Case xli. F. H., aged about 30, had been the subject of femoral hernia of the right side for two years, the tumour having appeared suddenly one day whilst kneeling at church. Strangulation came on without any very marked effort, but pain and vomiting commenced at once. Calomel and opium were administered, and the patient was bled before I saw her. The loss of blood made her easier, and appeared to lessen the sickness. The tumour was as large as an apple. I operated about thirty-six hours after the strangulation occurred; and, finding that I could not pass the fingernail or director under the margin of Poupart's ligament without opening the sac, I punctured it, and let out a considerable quantity of bloody serum. The intestine was very dark, but firm and polished. After dividing the stricture upwards, and exercising a little gentle pressure and manipulation, it was returned. I used two sutures, and a compress and bandage. The patient was relieved of all distressing feeling directly the stricture was removed; and she recovered without a bad symptom of any kind, and was quite well in ten days. There is nothing especially worthy of notice in the case, for everything was plain and straightforward, as if the descriptions in the surgical and anatomical books had been taken from one in every respect similar. It was my first operation for hernia, performed at night, at some distance in the country, away from surgical support; and I was therefore very thankful to meet with no unusual difficulty.

Case xlii. D. C., aged 59, never wore a truss to relieve a hernial tumour of the right side, from which she had suffered for ten years, and which went back at first, but for the last few years had become permanent. The protrusion increased and became strangulated upon making a violent effort, and severe symptoms began at once. Attempts of various kinds were made to reduce the swelling, but without avail; and when I saw her, about sixty hours after the accident, the tumour was as large as an orange, hard, firm and tense, red, and very painful and œdematous. The pulse was rapid, and vomiting incessant. The case had indications of having undergone quite enough manipulation in the way of taxis, and I therefore operated; but, owing to the œdematous and tense state of the skin, I was unable to draw it together into a fold as usual. The sac was opened, and the stricture divided upwards and inwards. The contents were, besides a small quantity of dark bloody fluid, a coil of intestine quite black, but smooth and polished, and a considerable portion of omentum, some of which was hard and thickened, having obviously been in the sac for a great length of time. After returning the intestine, I tied the omentum in strips, and cut off the thick part of it, leaving the ligature hanging out of the wound, which was

brought together by sutures. She was treated first of all with opiates, and soda water to relieve the vomiting, which still continued. On the second day, some flatus passed from the rectum, showing that the canal was pervious; but she still complained of abdominal pain, and vomited a quantity of green fluid. On the third day, she had an enema of gruel and castor oil, which acted freely, and she was better from this time; being, however, very weak. I gave her six ounces of port wine daily, with the aid of which she soon recovered.

This patient had a very narrow escape; for the œdematous condition of the integuments over the tumour was a sign of mischief within, and the persistence of the vomiting after the reduction of the intestine showed that it had been so pinched that it could scarcely recover itself. The omentum must have acted in a great measure as a protection to the bowel; and, but for its presence in the sac, the efforts at reduction would probably have produced even worse effects than they actually did.

Case xliii. J. P., aged 33, somewhat deformed in the limbs from old rickets, had suffered from hernia of the right side for some years; had never worn a truss; and, four days before her admission, symptoms of strangulation had appeared. She had been constantly sick, and the abdomen was distended and tender. The tumour was of about the size of a walnut, and unusually moveable. After trying the taxis, under chloroform, and finding that it was useless, as it generally is in cases of hernia where the tumour is hard and moveable—for these conditions show that it is held by a tight and narrow neck,—I operated, making the first incision by holding the skin over the tumour in a fold, by which means the superficial fascia, as well as the skin, is cleanly divided at first, and the subsequent dissection begins from a known point. After coming down to the sac, I opened it, and some fluid escaped, and what appeared to be intestine was exposed to view. It was smooth and shining, and of a pale colour; but it was quite impossible to pass my nail or a probe under the stricture; and, upon drawing firmly the divided edge of the sac, the convex surface of the tumour and the concave surface of the sac were found to be quite continuous with one another; and it was obvious that another sac was contained within that just opened. This was punctured, and some fluid escaped, and the intestine exposed. It was black, smooth, and polished; and, after some difficulty, I introduced a curved director, and divided the stricture, when the intestine slipped in at once. The after treatment consisted of opiates and rest. The bowels not having been moved by the sixth day, a small dose of castor oil was given; and this had the desired effect. She had retention of urine for three days after the operation, at which time she was menstruating. She was cured in about three weeks.

There are but few cases of double sac recorded, some by Chevallier, and by Dupuytren and Lawrence; and this one which I have just narrated corresponds entirely to those described by these authors. The formation of the double sac is in the following way; the original hernial sac becomes cut off by adhesion from the rest of the peritoneal cavity, and another protrusion takes place exactly at the same spot.

Case xliv. S. T., a little fat old woman, aged 66, had not been subject to hernia, but it came on suddenly two days before her admission, when, besides the tumour in the right groin, she complained of constipation, frequent vomiting, and general fever. After trying the taxis before and after the administration of chloroform, I operated, and, opening the sac, divided a very tight stricture; and the intestine, which was dark, slipped back at once.

She had an opiate immediately; but the bowels were open soon after operation. After this, she went on well for some days, still having a little fever, and the inguinal region still being tender; and on the eighth day, the wound looked sloughy, some shreds of tissue hanging out of it. The next day, very fetid discharge, with air and semifluid matter having the appearance and odour of fæces, flowed out, and she appeared easier. The bowels, however, were regular, and this unnatural discharge ceased in a few days; and, in three weeks from the operation, the wound was nearly healed. She remained in the Infirmary for two weeks longer, and then was discharged cured.

The large quantity of fat in the subcutaneous cellular tissue rendered this operation a little more difficult than operations for hernia usually are, and the stricture was extremely tight. There was nothing besides the tightness of the stricture to account for the troublesome symptoms that followed, and they might have depended upon a small slough of the intestine, or, what was more probable, upon sloughing of the sac itself, an accident we occasionally meet with.

Case xlv. M. S., aged 48, had been accustomed to wear a truss; but one day it happened to be broken, and, whilst lifting a bucket, the tumour appeared, and she could not reduce it. I saw her on the third day, and then she was vomiting; her bowels had not been moved; and the abdomen was becoming tender. I gave her a turpentine enema, and applied ice over the tumour; and then tried the taxis, under chloroform, but without avail. I therefore operated, and opened the sac, finding within a piece of distended colon, with omentum. The tumour was as large as the fist. After dividing the stricture as usual, so that the finger could pass up into the abdomen, I tried to return the intestine, but in vain; and it required a second division before the hernia could be reduced. I also returned all the omentum, and applied three sutures, compress, and bandage; and ordered her an opiate at once, and again at night. On the third day, the tumour was as large as ever, the omentum having come down again. She slowly mended for a week afterwards, and then went home, because her husband was very ill.

Case xlvi. M. W., aged 50, had been the subject of femoral hernia of the right side for twenty years; and, eight years before I saw her, she had been operated on for strangulation of the intestine, since which time the disease had been irreducible. Three days before I saw her, as she was coughing, the swelling increased and became painful, and began to discharge; and, upon examination, I found a large and irregularly lobulated oval tumour extending across the upper part of the right thigh, and overlapping Poupart's ligament. The abdomen was tense and painful. Upon the outer side of the protrusion was an ulcerated hole, through which serum flowed freely. She had vomited, and the bowels had been confined. I operated, and opened the sac and integuments to the extent of nearly an inch; and, introducing my finger, found the intestine healthy in colour, and the opening into the abdomen free. She became extremely collapsed, and appeared to be sinking; and therefore I did not proceed further with the operation, but brought the parts together, and had her put in bed. The next day, she was much worse, her symptoms evidently being unrelieved. I therefore operated again, and made two separate cuts into the tumour; and found the intestine, of which a very large quantity was in the hernia, agglutinated together by recent peritonitis. This I thoroughly broke down with the finger; and, after bringing the wounds together as well as I could, I ordered her some calomel and opium in pills. The first effect of the operation was, that she passed flatus *per anum*, giving great relief; and, after a good night's rest, she gradually recovered, the tumour still existing upon the upper part of the thigh, and the hernial sac and integuments being so firmly adherent to one another, and so thin from the pressure, that the peristaltic action of the contained intestine could be discerned within. She went out cured, supporting the tumour by a firm bag-truss.

The peculiarities of this case were the size and irreducible state of the hernial protrusion, in the lower part of which strangulation from some inflammatory condition had been set up; and this was relieved by the second operation which I performed upon her.

After this time, the patient came into the Infirmary, suffering from somewhat similar symptoms, which were relieved by purgatives; and about two years afterwards she died.

Case xlvii. D. F., aged 45, had suffered from hernia for many years, but never wore a truss. It had been down twenty-four hours before her admission, and moderate efforts at reduction had been made. The tumour was hard and painful, and the other symptoms acute. I applied ice, gave her chloroform, and used the taxis, but ineffectually; and therefore operated when strangulation had existed only twenty-six hours. The operation was straightforward in every respect, but the stricture was excessively tight. After the sac was opened, I had some difficulty in getting the blunt curved director underneath Poupart's ligament; but it was satisfactorily done at last; and, immediately upon the division of the fibres, the intestine slipped back. It was very black, but firm and polished. When she awoke from the chloroform, she expressed herself as relieved and easy. Sutures and compress were used. She went on well at first; but, the abdomen continuing tender, I ordered her a grain of calomel and a quarter of a grain of opium every three hours. On the fourth day after the operation, the bowels were moved, and she appeared better; but upon the seventh day, a sloughy substance, which I supposed to be the sac, presented itself at the wound; and this was followed by some fetid yellow matter, which increased very much on the next day, and was obviously fæcal. This continued, at

one time copiously, at another sparingly, for eleven days, when I gave her a dose of castor oil, and the bowels were moved naturally. The discharge from the groin continued to be fæcal until the twenty-second day after the operation, when it ceased finally; and in three days more the wound was healed.

This case of artificial anus is remarkable on several grounds. It shows that, in acute strangulation, sufficient damage may be done to the intestine to cause a slough in some part of its circumference in twenty-four hours; and that, under favourable circumferences, this aperture will heal of itself. The patient had great difficulty in holding herself upright for a considerable time, owing to the adhesion formed between the intestine and the parietes. I believe that the hernial protrusion reappeared at the same place some time after she went out.

Case xlviii. M. C., aged 60, was admitted with a strangulated hernia, which had appeared first of all two days before, and upon which, the previous day, some forcible efforts at reduction had been made. She had constipation, vomiting, and pain in the tumour and over the abdomen.

In operating, I tried to divide the stricture without opening the sac, but could not succeed in doing so. In the sac was a quantity of bloody gelatinous serum, and a coil of intestine, black, collapsed, and rough and ragged upon its surface. Upon touching the stricture with the edge of the bistoury, it gave way at once, and the intestine went back. Believing that this patient also was suffering from peritonitis, I treated her with some calomel and Dover's powder, giving her at the same time a little wine, for her pulse was rapid and weak. Large quantities of serum flowed from the peritoneal cavity, and she suffered from retention of urine. She continued to take mercury and opium for six days, when the mouth became a little sore; and at the same time the pulse became quiet, and the bowels were moved. She was cured in a few days afterwards. The effect of the mercury in this case was very distinct, and it undoubtedly aided in bringing about the good result that followed. The intestine was so much damaged by the effects at reduction, that I was fearful it would slough; and I have seen many deaths from the intestine not recovering its vitality, when apparently it was not worse than in the present instance.

Case xlix. M. R., aged about 50, had been the subject of hernia in the left femoral region for some years. It had become strangulated four days before I operated, at which time she was very prostrate and weak, and constantly weeping and vomiting. In the sac I found omentum and a piece of black polished intestine: the latter was returned easily after the division of the stricture; the former was allowed to remain. She had swallowed a large quantity of purgative medicine before the operation; and when the stricture was relieved and the protruded bowel replaced, a troublesome diarrhœa set in, requiring opium and other astringents. She made a speedy and satisfactory recovery.

Case l. T. B., aged 60, a farm labourer, fell from a hayrick; and, two days afterwards, he found that he had a swelling in the groin, which was very painful. Vomiting commenced the day after the injury, and he was admitted as my patient on the morning of the fifth day, when I found that he had strangulated femoral hernia of the left side; the tumour being red, and the skin œdematous. I cut down upon it; and, before opening the sac, a quantity of purulent matter flowed out, apparently from the cellular tissue outside the sac. The intestine was dark, and tightly pinched in the opening; but the whole circumference of the bowel was not included underneath the stricture. Upon dividing the edge of Poupart's and Gimbernat's ligament, the hernia was at once reduced.

This patient required stimulants after the operation, to keep him alive; for he was extremely sunk and prostrate. The bowels were moved on the third day, with the aid of two drachms of castor oil and twenty minims of turpentine.

A week after the operation, the sac sloughed out, and the wound soon healed. He suffered from retention of urine, requiring the catheter, during the progress of his cure.

Case li. A. M., aged 52, the subject of hernia previously, found an increase in the tumour and a painful state of the abdomen sixty hours before I saw her. The vomiting was distinctly stercoraceous; and the rupture was small and hard, and in the left femoral region. I opened the sac, in which was some very dark fluid; and found a small coil of black polished intestine, which slipped back into its natural cavity immediately upon the division of the stricture. One suture, compress, and bandage, were applied. She recovered without a bad symptom, the bowels having been opened with castor oil on the fourth day.

Case lii. C. S., aged 30, had hernia for six years, and had worn a truss; but, seven hours before I saw her, her foot slipped a few inches off a plank, and the sudden jerk to the body brought down the swelling. It was in the right groin, and of the size of a walnut, very hard and painful; and the general symptoms were urgent. I operated about nine hours after the accident, and returned the intestine without opening the sac; and she appeared relieved at once. No bad symptoms followed; the bowels were relieved by two drachms of castor oil on the third day, and she was soon cured.

The following four cases are instances where the operation did not succeed in restoring the patient.

Case liii. E. M., aged 69, with strangulated femoral hernia of the left side. The disease had existed for many years, but had been strangulated only twenty-four hours before I saw her. She had vomiting and tenderness of the tumour and abdomen, and attempts had been made to reduce it. Upon operating, I found in the sac a considerable portion of intestine, rough, dark red, and thickened; and it contained hard fæcal matter. After dividing the lower part of Poupart's ligament, I tried to reduce the mass, but was unable to do so until there had been a second division made internally, involving Gimbernat's ligament; and then it passed back readily. She was treated with opiates. The bowels were moved on the third day, the sickness had ceased, and she appeared to be going on well at first; but, after a day or two, she became weak and sinking, with some hiccup, tympanitis, and intermittent pulse; and she died on the seventh day after the operation.

The *post mortem* examination showed general peritonitis and effusion of coagulable lymph, producing partial adhesion between the contiguous peritoneal surfaces. Eight inches of the ileum, near the valve, were very dark; and, although none of it was sloughing, one part was much thickened, and in a worse condition than it was at the time of the operation. A single tubercle, with a cicatrix of an old cavity, were found in the top of each lung.

Case liv. W. J., aged 56, had suffered from strangulation for about eighty hours before his admission. He was very dispirited and weak, and the tumour had been subjected to great pressure in attempts at reduction. I operated without chloroform. The sac contained a portion of very dark and rough intestine; and, after freeing the stricture, it was easily returned. Three sutures, compress, and bandage, were applied. I ordered him an opiate draught every three hours; notwithstanding which, his bowels were moved twice soon after the operation, and he seemed relieved. I ordered him a little wine, and in about twenty-four hours he seemed much better. He then suddenly began to sink, and died early in the morning of the third day.

A portion of small intestine was found, at the *post mortem* examination, to be very dark and adherent to the surrounding parts. There was no general peritonitis, nor effusion, nor any sign of injury about the ring. The intestine had not recovered itself, but it did not appear sufficiently damaged to cause death.

Case lv. M. M., aged 70, had suffered from hernia of the right side for some time, and it had been down and strangulated for ninety-six hours; but no efforts to return it had been made, for it had not been discovered. Upon operating, I made a very small incision, and found within the sac some dark fluid and a coil of black intestine, with a vein containing air upon its surface, and an abrasion of the peritoneum. The stricture was remarkably tight; but, as soon as it was divided, the bowel was very easily returned. Two sutures, compress, and bandage, were applied. This patient, having taken large quantities of purgative medicine, with the view to relieve the constipation that had existed for four or five days, was taken directly after the operation with diarrhœa, and she gradually sank, and died on the sixth day. No *post mortem* examination was made.

Case lvi. M. A. F., aged 48, with strangulated femoral hernia of the right side, of an oblong form, projecting over Poupart's ligament, which had been strangulated for ninety hours. It was discovered to be the cause of her sufferings, but she would not submit to be operated upon before. The symptoms were very urgent, but she was in a weak and collapsed state. I divided the stricture fairly, without opening the sac; but could not return its contents, and therefore I opened it, and found a mass of omentum, and underneath a portion of rough black intestine, of a tolerably firm consistency. The finger passed up through the neck of the sac, which was not divided; and the intestine passed up readily. I also returned the omentum, which appeared to be thickened by pressure, but not very hard. She was treated with stimulants and opiates;

but she did not rally at all, and died about twenty-four hours after the operation.

Post Mortem Examination. General intense peritonitis; the membrane being red, and the contiguous parts universally adherent; the lower parts of the abdomen and pelvis were full of serum and flakes of pus. The intestine that had been strangulated had not recovered itself, but it was not sloughy.

[*To be continued.*]

CASES* OF TUBERCULAR MENINGITIS: WITH REMARKS.

By William Robinson Hill, M.D.Edin., one of the Hon. Med. Officers to the Eastern Dispensary, Bath; Ext. Mem. and formerly President of the Roy. Med. Soc., Edin.

The pathology, diagnosis, and treatment of tubercular meningitis, are points of great interest and importance; and the comparative rarity of the disease, in adults at least, will, I hope, warrant me in bringing the subject before you.

As evidence of this, I may mention that these were the only cases that occurred out of about three hundred phthisical patients that came under my own immediate observation in the course of a year at the Brompton Hospital for Consumption.

Of these three hundred, about two-thirds were of the male sex, and in each case the subject of the attack of meningitis was a man; therefore, I imagine we may fairly conclude that the disease, though affecting only a very small per centage of consumptive patients, is more common in males than in females. Without further preface, I shall give the details of the more interesting features of the three cases, and conclude with some remarks on certain points which seem to be illustrated by their history.

Case I. R. P., aged 38, a footman, born in Norfolk, and living in London, but of Irish extraction, was admitted into the Hospital for Consumption at Brompton, on June 3rd, 1858. He was of a consumptive family, and had been subject for some years to a winter cough, leaving him in summer. At the time of his admission, he had coughed only for six or eight weeks, and had been affected also with dyspnœa and considerable pain in the left side, increased by deep inspirations. During the latter half of the period, the cough was accompanied by a little expectoration, and on one occasion by slight hæmoptysis. His appetite had fallen off and he was losing flesh rapidly. His pulse was small and frequent, 120 per minute, and the respirations 40 per minute. He complained of headache, from which he had suffered more or less for two months.

As regards the state of the lungs, with the exception of some marked dulness and absence of respiration at the left base, indicating the presence of fluid in the pleura, the physical signs were vague. The respiratory sounds were harsh at some points, and accompanied generally throughout both lungs by sibilant rhonchus. Small crepitation was also heard in both lungs at different points.

Two days after admission, I noticed that whilst the patient's right pupil was of considerable size, the *left* one was very much more dilated, but further than this there was no other perceptible change in his condition, either physical or mental. On the day after, the left pupil remaining as fully dilated as formerly, the right one was noticed to be even *larger* still, so that that iris existed merely as a narrow rim. Neither of the irides showed any contraction on sudden exposure of the eyes to a strong light.

Moreover, there was ptosis of the right upper eyelid with paralysis of the superior, inferior and internal recti muscles of the right eyeball, indicated by strong and motionless divergence of that eyeball towards the outer canthus. The condition of his mental faculties varied, as at some periods of the day he was quite rational, at others he was talking nonsense, and sometimes he was insensible. In his rational moments he declared the pain in his head was not so great as formerly. His pulse was still at 120, but increased in volume. The tongue was dry and heat of skin great. His urine was examined, and found to be of specific gravity 1025, of neutral reaction, and speedily becoming alkaline and depositing phosphates on the application of heat; not containing albumen.

He was ordered a mercurial pill to be given three times a day and a blister to be applied behind each ear. The blisters rose well, but the patient's delirium and insensibility continued to increase. Paralysis of the muscles supplied by the third nerve on the left side also supervened, as well as could be made out, as the divergence affected *both* eyes. He had retention of urine also, and some tympanitic distension of the abdomen. He continued to sink rather rapidly, and died on the fourth day after the first dilatation of the pupil occurred.

Autopsy. Head. There was an unusual amount of cerebro-spinal fluid. The arachnoid on the upper surface of the brain was opaque and gelatinous-looking. At the base it was much thickened, and contained little masses, which, with the microscope, were seen to consist of small granular cells, such as are always seen in the tubercles of the meninges. Each lateral ventricle contained about an ounce of serum. The brain substance appeared normal throughout. The third nerve on the *right* side was of a dark red colour, for the distance of about one inch, commencing near its origin. It was also thicker and firmer than natural at that part. The left nerve seemed to be of normal structure.

Thorax. There were some, not very firm, pleural adhesions on the right side over the diaphragm, also at the apex and along the anterior margin of the left lung. The left pleura contained about a quart of dark red clear serum.

The right lung was infiltrated with small hard miliary tubercles, though its substance was crepitant and floated well in water. It was also congested. The left lung had much the same characters.

The pericardium contained about an ounce of serum. The heart weighed nine ounces and was quite healthy.

Abdomen. The liver weighed three pounds eight ounces, and appeared normal. The kidneys and spleen were also healthy, but congested.

Case II. P. M'L., aged 33, a labourer, of Irish parentage, living at Westminster, was admitted on February the 9th, 1859. He knew of no hereditary tendency to consumption, but had been addicted to drink and prize-fighting. The only history he could give of himself was, that he had had a slight cough, and had been losing flesh for two years, though he stated that he had had hæmoptysis to the amount of four quarts seven years previous to admission and to a less extent subsequently on four or five occasions. He had had no other illness. His appetite was good, tongue pretty clean, and pulse below 100.

On physical examination of the chest there was distinct evidence of a cavity at the apex of the right lung with softening extending low down, and a rather harsh character of the respiratory sounds with a shade of dulness indicated the presence of a small amount of deposit at the left apex.

He was treated with cod-liver oil and counter irritation by iodine under the right clavicle, and with the exception of one slight attack of hæmoptysis progressed favourably during the first fortnight, after which time he began to complain of feeling very ill with much headache, and he soon began to be very restless at night, constantly getting out of bed, and unable to micturate. On March 2nd, the catheter was used, and this was continued as often as required, to the day of his death. The urine, on examination, was found to be of specific gravity 1011, of alkaline reaction, and containing albumen in some quantity. Two days after, there was partial inability to speak, though the patient seemed quite sensible. The pupils were equal and contractile. On the following morning, he was quite unable to speak, and was only partially sensible. There was slight divergent squint with great dilatation, and immobility of the *left* pupil, the right one remaining only moderately dilated. His pulse was 144 per minute, and very weak. In the evening of the same day, the *left* pupil was a little smaller than it had been in the morning, and the right one was then larger than the left. They were both immobile.

On the next day, he was much weaker and quite insensible. Both pupils were much dilated, the *left* being a little the largest. There was apparently no other paralysis. He continued to sink, and died early the next morning. The only treatment adopted during the last week of this man's life was the frequent administration of small quantities of the mist. sp. vin. gall. together with other measures for supporting his strength.

Autopsy. Head. The dura mater and arachnoid were rather unusually adherent to one another. About two ounces of cerebro-spinal fluid escaped. The surfaces of the lobes in the fissure of Sylvius were very adherent to one another, and there was much opacity of the surface of the hemispheres from subarachnoid effusion. The membranes round the roots of the nerves at the base of the brain were congested, thickened, and opaque, containing little hard masses, the size of pins'

* The first two cases were patients of Dr. Quain, and the third was under Dr. E. Smith, to both of which gentlemen I am indebted for courteous permission to make use of the notes I took of their history and treatment.

heads, which, by the microscope, were seen to consist of small, somewhat irregular, granular cells. Each lateral ventricle contained about an ounce of fluid. The brain substance appeared normal, and no lesion could be discovered in the roots of the third or other nerves.

Thorax. The heart weighed twelve ounces and a-half, and was healthy. The layers of the right pleura were densely adherent, and thickened throughout. There was no adhesion in any part of the left. The right lung was very much contracted and almost entirely riddled, even to the base, by cavities, the intermediate lung-substance being compressed, with no crepitant structure. The pleura between the lobes was thickened, and that surrounding the lung was in some parts nearly half an inch thick. The left lung was very voluminous, extending three inches to the right of the mesial line. It was somewhat emphysematous, and contained a few cretified particles, the size of millet seeds, in its upper lobe.

Abdomen. The liver was voluminous, weighing seven pounds, and was of very firm consistence. With the microscope scarcely any trace of normal hepatic structure could be seen and *very little* oily matter. A thin section had a semitransparent appearance, and when treated with solution of iodine, nearly the whole of it gave the red colour characteristic of the amyloid or waxy degeneration. The spleen weighed fifteen ounces, and was probably waxy, but was not examined carefully. The kidneys weighed together twelve ounces and a-half. Both of them were pale, with rough, corrugated surfaces, and abnormally adherent capsules. The cortical substance was perhaps a little thicker than natural. In it the Malpighian corpuscles and vessels leading to them gave the amyloid reaction, and in the pyramids some vessels gave the same reaction with weak solution of iodine.

Case III. M. M., aged 24, an Irish labourer, living at Hammersmith, was admitted on the 1st of March, 1859. He had no hereditary tendency to phthisis, but had coughed for eighteen months with purulent expectoration. He suffered much from dyspnœa but had never had hæmoptysis. His digestive organs seemed in pretty good order, though he had been losing flesh for eighteen months. Pulse between 80 and 90.

A physical examination of the chest revealed extensive tubercular affection of the right lung, with somewhat obscure indications of a cavity, and affection to a very much less extent of the left apex.

After he had been ten days in hospital there was less cough and expectoration than on admission, but he began to complain of pain all through him. This continued for about a week. There was no sign of inflammatory accession at the base of the lungs, but the tongue was brown, furred, and dry, whilst the pulse remained at 88, and there were perspirations at night.

He vomited everything he took, but there was no paralysis of any part, nor were there any other *direct* head symptoms. The pupils were contractile and equal, and he was quite sensible until the sixteenth day after admission. On that day, (the 17th of March) he became nearly insensible, taking no notice when questions were put to him, picking the bed clothes, and troubled with occasional hiccough. The right pupil was a little larger than the left, though both were small and contractile. Pulse in reclining posture 52. The day before a blister had been applied to the back of the neck, and three grains of hydrargyrum cum cretâ were ordered every sixth hour, and he now had the milder mercurial ointment rubbed into the armpits and thighs. He had port wine every hour or so, and the pulse rose towards evening to 72.

On March 18th, the coma was complete, attended by muttering and moaning, with constant hiccough, and a slight degree of rigidity of the arms. Urine was passed in bed. The pupils were equal and contractile, rather more dilated, but there was now slight divergent squint, apparently from paralysis of the left internal rectus. Pulse 72. Towards evening of the same day, his pulse rose to 92; but in other respects his condition was as before noted. The wine was now stopped, and he was ordered to have the head shaved and blistered. Mercurial inunction was to be continued as before, and also to be applied to the blistered surfaces. He was further ordered a grain of calomel with two grains of antimonial powder every second hour, and a quarter of a grain of tartarised antimony every fourth hour. He was cupped over the temples, but only two ounces of blood could be extracted, and the pulse soon after fell to 70, and was not so full; and about a quarter of an hour afterwards, the head was drawn to the left side with great rigidity of the muscles of the neck.

At seven in the evening, the rigidity of the neck was gone. The pulse had risen again to 120; therefore a leech was applied to each temple. The conjunctivæ were more injected than they had been during the fore part of the day.

At nine P.M., it was noted that the pulse was very variable, sometimes at 92, and shortly after at the rate of 140 to 160 beats per minute. The breathing throughout was also very changeable, sometimes slow and sometimes rapid.

The next day at two in the morning he was much in the same state. Pulse still rapid and more fluttering than formerly. He died at five the same morning.

Autopsy. Head. Membranes very much congested, and there was an unusual amount of cerebro-spinal and subarachnoid fluid. Each lateral ventricle contained more than half an ounce of fluid. There was some thickening of the membranes and small tubercles were seen the size of pins' heads, in the arachnoid at the base of the brain and cerebellum, not so much round the anterior nerves as round the pons varolii and medulla oblongata. The walls of the fourth ventricle, and particularly the anterior wall, were dotted with a great number of little tubercles, consisting of granular cells, in size about one-third less than red blood-corpuscles. The substance of the brain appeared normal.

Thorax. The heart was healthy. The right lung had pretty dense pleuritic adhesions round the upper lobe, and there was a vomica at the apex, the size of a small orange, with very little tubercle in the lower lobe. There were very slight pleuritic adhesions at the apex of the left; and a few small hard masses scattered here and there through the upper lobe, were the only trace of tubercle in that lung.

Abdomen. The liver was rather fatty. The spleen and kidney, which was horse-shoe, were healthy.

Remarks. In reviewing these cases, the first thing to notice is the various modes of the primary manifestation of the cerebral affection, or the premonitory symptoms which gave indication of its approach. In all three cases, the mental functions, and some of the motory nerves, were more or less prominently affected, but at different periods of time in relation to each other and in different degrees of intensity.

In the two first cases there was headache, though in one it had been of such a chronic character, without great severity, that much attention had not been directed to the circumstance, whilst in the third case headache was not complained of, but there was general pain through the body and vomiting, which gave rise much more to a suspicion of the approach of an ordinary febrile attack.

In each case there was paralysis of some of the muscles in one or both of the orbits, and this symptom manifested itself with greatest prominence in the first case, where one eye was affected, unconsciously to the patient, before any impairment of the mental faculties had taken place, whilst the reverse obtained in the two other cases. It may further be noticed that the supervention of the commencement of coma was followed in each patient by death within seventy-two hours.

Some of these facts are interesting when looked at in a diagnostic point of view. Judging from the above cases, continued headache with paralysis of some of the orbital nerves in a tuberculous patient, may be looked upon as certain forerunners of coma and death from tubercular meningitis, and it would be well if we could be warned of the approach of the malady at an earlier period, before it had run its deadly course so far, before the chance of warding off the fatal result by treatment had slipped away.

An analysis of the premonitory symptoms in the above cases illustrates, however, the difficulty, if not impossibility of this, for in Case I. the headache and rapid pulse might well be attributed to the general febrile state induced by the disease of the lungs, and it was only the condition of the irides that first announced the fatal inflammation; whilst in Case III, as above stated, the general symptoms indicated much more the ushering in of some fever, and the loss of consciousness alone revealed the real condition of the patient. One noticeable fact wherein this case differed from the others is the slow condition of the pulse, which decreased in frequency as the disease progressed, with the exception of during the last few hours of life, when its variability between 90 and 150 was most sudden and frequent.

Keeping these things in mind, the only deduction we seem to be warranted in making is that continued headache with some febrile symptoms in a phthisical patient, when it can be traced to no other known cause, may be regarded as strong presumptive evidence of an impending attack of tubercular meningitis.

It will be observed that the course of treatment adopted in

all these cases was in some measure different, though their issue was one. In the first case, a mild mercurial course and counterirritation were practised. In the second no depletive measures were adopted, but, on the contrary, a stimulant and a strengthening course was followed, whilst, in the third case, active depletion and a free use of mercury internally and externally, met with no better result than the two other modes of treatment. No hint can thus be drawn regarding the treatment of tubercular meningitis from these cases.

The treatment I should be most inclined to rely upon would be counterirritation without active depletion; for blistering at the nape of the neck, and behind the ears is so often seen to be followed by marked benefit in cases of continued headache, though in these it is, of course, impossible to *prove* that meningitis has been averted.

The last point I would notice in these interesting cases, is a pathological one, viz., the relation between the *post mortem* appearances at the base of the brain and the manifestations of cerebral disease during life. In the first case, the membranes at the base of the brain were affected, and the right third nerve most notably so, manifested before death by the most complete paralysis of its orbital branches to the superior, inferior, and internal recti muscles, to the iris, and to the levator palpebræ superioris.

In the second, the inflammation was more extended over the base of the brain, involving the nerves only in a general way; and accordingly we find, during life, besides the coma, only slight divergent squint with affection of the pupils.

In the third case the inflammation was seated much further back than in the first two, with which we find the symptoms were in accordance, for the muscles of the eyes and the irides were very slightly affected, shewing that the third nerves, which arise anteriorly, were little involved, whilst the phenomena noticed in this case and absent in others, viz., hiccough, slow pulse, and irregular respiration, may be traced to the fact of the inflammatory affection being seated principally around the medulla oblongata and in the fourth ventricle, as the *par vagum*, which supplies the diaphragm and furnishes branches to the cardiac and pulmonary plexuses, takes its deep origin from nuclei of grey matter in the medulla oblongata at the floor of the fourth ventricle, and hence would be exposed directly to the effect of the inflammatory process.

That these conclusions are correct is corroborated by the experiments of E. H. Weber, which tend to prove that stimuli conveyed through the pneumogastric nerves retard the heart's action, and also by the experiments which have been repeatedly made in dividing these nerves, after which the respiration immediately becomes slower.

CASES OF DIPHTHERIA.

By Nathaniel Crisp, Esq., Swallowfield, Berks.

[*Read before the Reading Pathological Society, June* 1860.]

Mr. President and Gentlemen,—Several cases of diphtheria having recently been under my care, I venture very briefly to bring them under your notice, and in so doing shall endeavour somewhat to classify them, and then make some short remarks.

The first two cases occurred in one family during June 1859, in the persons of two brothers,—one aged 13, the other 5 years. The elder brother was attacked first; the tonsils and uvula were thickly covered with a well marked tenacious membrane, which could be peeled off in large flakes; prostration was extreme, accompanied by much difficulty in breathing; expectoration was very profuse, consisting of thin mucus, mixed with many shreds of membrane; slow convalescence took place, retarded after careless exposure and over exertion, by an attack of severe general anasarca; ultimately he recovered well. The younger brother was shortly afterwards attacked with the same class of symptoms; the disease, in this case, also involved the nares; he soon recovered, but for some time suffered from fluids passing into the nares during deglutition.

The next two cases also occurred in one family, but at different times; the first in a child 3 years old, during September, 1859. The disease had existed for some days before I saw him, and at that time he was moribund, or almost so, death taking place early the next day. The great difficulty experienced in getting a view of the throat, the very laryngeal breathing, and the rapid death, made me, at the time, inclined to regard it as a case of croup; but my opinion was altered when, about four months after his death, a brother, aged 12, was attacked in a similar manner; his tonsils presented well marked patches of membrane; but from the first the attack was milder, and he recovered.

The next series of cases occurred in one family and presented many points of peculiar interest. In October 1859, a daughter, aged 20, who had been helping look after a bedridden old man, residing in a cottage opening into a stagnant reeking farm-yard, came home to her parents' cottage, situated about a mile from her former abode, with sore throat. When seen by me, it appeared likely to prove a severe case of diphtheria, the symptoms and appearances being well marked; but she soon recovered. Six months afterwards, or at the end of last April, a sister, 6 years old, began to ail, apparently without any specific cause, and rapidly got worse; the leathery membrane was thickly laid over the throat as far as could be seen; the breathing became more and more laryngeal; exhaustion, great from the first, was soon extreme, and she died on May 3rd, the fourth day after she was seen. On May 7th, a brother, nine years old, began to complain in the same way; the right tonsil presented a well marked patch of leathery membrane, its upper edge peeling off and hanging down, exhibiting well its tough consistence; the throat became more and more involved for some days, and then very gradually began to recover its normal state; and he is now, after a prolonged period of extreme weakness, tolerably well. On May 11th, another sister, aged 14, was attacked; this case, from the first well marked, for a day or two appeared yielding to treatment; but as the larynx became involved, very profuse expectoration took place of thin mucus mixed with numerous flakes of tenacious membrane, some of which exhibited in a marked manner the shape of the interior of the larnyx and trachea, one large piece, in particular, plainly having been detached from the lower end of the trachea and the adjoining portion of one of the bronchi; the strength rapidly gave way, and death ensued on the tenth day of the illness. The mother now complained of sore throat; but beyond a somewhat relaxed condition, nothing marked appeared, and she showed no more signs of diphtheria. On June 1st, another daughter, aged 11, was seen with many symptoms of diphtheria; she only presented a swollen condition of one tonsil, but much more general disturbance of the system than usually accompanies such a state of throat, and she, as well as her mother, recovered after a few days. On June 2nd, a brother, aged 13, after complaining for one day, presented well marked deposit on the left tonsil and appeared likely to have a severe attack, but slowly recovered.

About two months prior to the occurrence of these cases, in the same parish, but at some distance apart, five cases occurred in one family; four children, aged respectively 3, 6, 8, and 10 years, being ill at the same time, and shortly after the mother sickened. All these cases were well marked, and severe in two instances, but all did well. Erythema nodosum of a severe type retarded the convalescence of the eldest child.

In a cottage at the back of the one where the first two cases occurred in June 1859, a strong robust young man, 21 years of age, died in December last. I attended him only during the last part of his illness; his prostration was most extreme; expectoration was very large in quantity, consisting of offensive thin mucus, a little streaked with blood and mixed with shreds of diphtheritic membrane; he rallied somewhat, and appeared progressing favourably; but died suddenly, apparently suffocated.

In February last a delicate lad, aged 7, living about a hundred yards from this last case, began to complain of sore throat, the right tonsil was first attacked, and then the left; it threatened to assume a severe form, but the child did well, notwithstanding a relapse and recurrence of the deposit in the throat.

The next series of cases originated, and with two exceptions were attended, in the parish of Bramshill, on the edge of a large and somewhat marshy common. In February 1860, a lad, aged 16, came home from a farm-house situated on this common, where he had been for some time previously living, to a village, two or three miles off; he was then complaining of sore throat, and when I saw him, a day or two afterwards, decided symptoms of diphtheria existed, prostration rapidly supervened, accompanied by delirium and very abundant expectoration of the same nature as before mentioned; he died somewhat suddenly the sixth day of his illness. The next week his father was laid up; the attack was mild, and he did well, but he is still somewhat weak, and complains of tingling and numbness of his hands. A month after this, a case occurred in a cottage, a short distance from the farm-house just referred to. The patient, in this case, was a boy, 9 years old; the symptoms

were very severe; expectoration was extraordinarily copious, and of the same nature as in the other cases; suppuration took place in the cervical glands; and he died about the twelfth day. Two days before his death, a girl, 9 years old, residing at the other end of the common, was seized with similar symptoms; the disease ran a severe and rapid course, and she died on the fifth day. Sixteen days after this child's death, another girl, 9 years old, her constant associate and playmate, and residing in the adjoining cottage, was attacked; she has recovered, but after a severe struggle. Three days later, another girl, fourteen years of age, residing in a farm-house a short way off, and who frequently came to see the last two during their illness, and after the funeral of the first one remained in the same cottage, began to complain in a similar way, and died on the fifth day. Five days after this, the mother of this one was the subject of diphtheria; and at the same time an uncle also, who resided about half-a-mile off, and had sat up one night with his dying niece; the mother recovered, but still remains weak; the uncle made a rapid recovery. Almost immediately after this, a child of this man's, 3 years old, complained of sore throat, but there appeared nothing marked in this case, and the child was soon well. No more cases have appeared in this immediate neighbourhood; but a short way off, and in a locality very similar, a case occurred just afterwards; the boy was 6 years old, was very ill at first, but was soon convalescent. About the middle of last month I attended a woman about 30 years of age, living far away from any of the above mentioned, in whom the disease had existed for some days; when first seen, the state of the throat was not clearly indicative of diphtheria; but the next day I was shown a distinct patch of membrane, evidently diphtheritic, which she had expectorated. Convalescence, in this case, was slow.

This completes the list of cases which have fallen under my notice in this neighbourhood—a total of 27, not reckoning the two or three referred to, which were of too slight a nature to render one certain as to their true character; out of these 27 cases, 8 were fatal. The general symptoms and course of the disease were very similar in the different parties affected.

After a day or two of general *malaise*, sore throat would be complained of; and if an examination were then made, one, two, three, or four light ash-coloured spots, on a swollen and vascular tonsil or uvula, would be seen. These patches of deposit, in most cases primarily placed in the follicles, increased in size, and coalesced, forming a patch varying from the size of a sixpence to a sufficient magnitude to cover both tonsils and the uvula; running forwards over the palate and dipping downwards as far as the eye could reach; in its earlier stage of a somewhat cheesy consistence, gradually increasing in tenacity, until a tough light-coloured membrane resulted, presenting much the appearance of the smoother portions of boiled thin tripe. In all the cases, more or less, difficulty in swallowing existed, often extreme; a symptom which in many cases on record has been wanting. The tongue was generally covered with a yellowish thick fur; a peculiar fœtor often existed, the skin was usually of a somewhat leaden hue; and, in the severer cases, an extremely and strangely anxious look existed. Slight febrile disturbance was present at first; the pulse, in almost all, being quick, feeble, and often thready. In cases which terminated in recovery, the edges of the deposit, no longer spreading, became more defined, in some very markedly so; the tonsils and uvula presented vivid redness; and, in one or two instances, the appearance reminded me much of that assumed in the line of demarcation in gangrenous conditions; as the deposit decreased, the power of swallowing returned, and with it strength was slowly regained.

Convalescence was, in one case, after early and imprudent exercise, retarded by severe general anasarca. A sharp attack of erythema nodosum occurred during the recovery of another; considerable hæmorrhage from the throat or nares took place in another; slight paralysis of the velum palati was observed in one or two of the cases; numbness of the hands continues to exist in one man, although he has otherwise recovered; a prolonged and severe state of nervous depression still retains its hold of one woman, perhaps to be attributed as much to the shock she sustained, in the loss of her only child, as to any peculiar effect of the disease itself.

In the cases which terminated fatally, the disease travelled downwards; the larynx becoming more or less involved, in six out of the eight, in the most marked manner; the general distress was extreme, prostration rapid and great, the countenance becoming dusky and the breathing markedly diaphragmatic; but death was apparently the result of exhaustion more than of actual asphyxia. In the instances in which the larynx was so implicated, expectoration was extremely copious and quite unlike that accompanying any other disease; one, two, or three pints a day in quantity; it consisted of offensive, thin, dirty, brown-coloured fluid, mixed with tenacious shreddy matter, and lumps of a cheesy and fatty-looking nature; streaks of blood were occasionally mixed with these products; in one or two of the cases, well marked casts of the interior of the trachea were observed. In one subject examined after death, the membrane clearly extended far into the bronchi, and in another nearly as far; the lungs, in these cases, being engorged with similar fluid to that expectorated during life. In two instances, one of which terminated quite, and the other almost suddenly, the fatal issue must, I think, be attributed to a sudden accumulation of this secretion in the air-passages.

Eight fatal cases out of twenty-seven may appear a very large mortality; but it is not more than has occurred in some other places. Of seventy-four cases noticed in the British Medical Journal, twenty-six died; and a large number of these had all the advantages of hospital treatment, where, of course, much more can be done than in the cottages of the poor. Here we have often to contend against poverty and dirt; the obstinacy of ill-educated children, who, by their struggles, as much resist one's efforts to see or apply remedies to their throats, as their relatives do through having no moral control over them, or by allowing false kindness to stand in the way of the steady pursuance of measures, because productive of some pain and discomfort. No one who has not experienced it can tell how vexatious and depressing to our energies it is to be called from one's bed, and to find, after a toilsome lonely ride, that no remedies have been applied; no medicines administered; no nourishment given for hours together; a disease markedly exhaustive in its tendency allowed full sway; all the instructions and orders we had given twelve hours before totally disregarded; and when the unfortunate doctor proceeds to enforce what ought to be done by the patient's own friends, he is looked upon as a brute, and every effort is employed, short of actual violence, to prevent his doing what he thinks right. This is no over-drawn picture in many cases: and, in addition to all these drawbacks, the unfortunate sufferer has to contend with the vitiated atmosphere of badly ventilated, ill lighted, overcrowded apartments; his friends make up their minds that the disease is almost necessarily fatal, and impress this upon his mind, if not in actual words, quite plainly by their actions and looks; when to all this is added, in some cases, the hardened indifference of relatives, no wonder that mortality is great. Against this high rate, it may be said that some have been more fortunate in their treatment; and I remember having seen a statement that one medical man had four hundred cases of diphtheria, one only fatal; another, about the same number, with no fatal case: this is rather too much for my belief, and is making this disease one of the most amenable to treatment.

I omitted to state that in no cases could I find any connexion between the disease and scarlet fever. The urine was not tested in all cases; but, in those in which it was, albumen did not by any means constantly exist.

The treatment adopted was generally the same: the free application of a strong solution of nitrate of silver; alum and acid gargles; chlorate of potash and muriatic acid internally, quickly followed by quinine and sesquichloride of iron; stimulants freely from the first. In two or three cases, in which the larynx was involved, emetics afforded relief, but only of a temporary nature; and the external application of iodine also was of some transient benefit. One general plan of treatment was pursued, as I considered that it was better to give a fair trial to one than to follow many; and, although in cases in which the windpipe was implicated, but little benefit resulted, the remedies mentioned certainly appeared to me to have marked effect when applied in time. Should any more severe cases come under my notice, I should be disposed to give chlorine a trial in some form, as a gargle or by inhalation.

Many such predisposing or exciting causes as we believe to be productive of or favourable to zymotic diseases in general, existed in most of these cases. The first fatal case occurred in a small overcrowded cottage, extremely ill ventilated, so situated that hardly a ray of sun could enter, and which, without any particular bad drainage or such like, was the very spot one would select for disease to be rife. Another death took place in a cottage, not so badly ventilated, but having immediately beneath the bed-room window a stagnant open cesspool, receiving all decomposing household matters. Its contents were in contact with the cottage walls; and although a water-closet was placed a short distance off, I doubt not but that this slough was the re-

cipient of much that ought to have been conveyed elsewhere. With its stench filling one's nostrils, the father could not allow that it was productive of harm, as it had been there for years. I had it filled up, but I see that it has been again opened, and is now in full use. At the back of the rank of cottages, where two children died, another such cesspool exists in close proximity to the well, and doubtless soaking into it, as the inhabitants tell me that the water soon becomes offensive, and that all such animals as frequently exist in wells soon die. By the side of another cottage, where five cases occurred, was a kind of shed; and in this shed, situated directly beneath the bedroom window, was a water-closet with an open cesspool and no drain to carry off the refuse matters from a family of eight or ten persons; the stench on one hot day defies description. The diphtheritic children in another family were allowed to make use of the open ground immediately by the back door, as it was thought dangerous for them to go a few yards further to the water-closet. At the back of another cottage, a ditch, closed at one end, has become a stinking cesspool; whilst the last case existed in a cottage surrounded by many trees, almost inaccessible to light or fresh air, badly drained; and at its back the stable-yard exists on higher ground, and in its immediate vicinity, if not actually adjoining, were crowded poultry-houses; this patient had means at command, and could get all she required, or the case might have terminated less favourably.

P.S.—I had hoped that no other instances of this affection would have come under my notice, but shortly after writing the above I attended a man living in quite a different locality to any of the preceding ones; he suffered in a marked but mild degree, and did well. He thought his illness might have arisen from drinking out of the same cup as a fellow-labourer who was suffering from some affection of the mouth and throat. What this was, I could not ascertain. Two cases have also occurred in another district, marshy in its nature. One was a girl, aged 7, who had a severe attack about six weeks ago, but recovered favourably. Three weeks afterwards, a brother, 4 years old, was attacked; the throat, which was severely implicated, appeared to have recovered its healthy condition, but no strength was regained, and he died in the third week from sheer exhaustion. Throughout the whole time he was ill, extreme difficulty was experienced in making him submit to treatment, or take any nourishment. To this, more than to the disease itself, I attribute his decease. The mother of these two children had had some communication with one of the cases before mentioned; but the children none. At the same time as this last child was attacked, another child, 10 years old, living some five miles off, but near where other cases had occurred, was the subject of diphtheria of a very severe form; she also recovered as far as the throat was concerned, and appeared quite convalescent, but very weak. In consequence of her mother being confined, for nearly a week she was much neglected, no proper nourishment being given her. Vomiting set in, and she died in thirty-six hours, the third week of her illness. On a *post mortem* examination, I discovered nothing to account for death, beyond a condition of the intestinal canal, plainly indicative of want of sufficient nourishment. On the same day on which I first saw this last case, I was called to a young woman who had come a day or two before on a visit to her friends, who resided a short way from one of the cases previously alluded to; this proved a very severe case; the larynx became involved, expectoration was profuse, and of the nature already described, the urine was highly albuminous, and prostration was great. She, however, readily submitted to treatment, and persevered in taking everything that was ordered, and is now convalescent.

The treatment of this last set of cases, has been somewhat different from that pursued in the others; no caustic was applied to the throat. The three children used a gargle of sesquichloride of iron; and, when they could be prevailed upon, drank freely of the same. Inhalations of chlorine were also used. In addition to such remedies, the case last mentioned took for some time chlorate of potash with free chlorine.

In these, as well as in all the other cases referred to, as far as was practicable, I removed the false membrane day by day.

That this disease is to a certain extent infectious is, I think, proved by the cases narrated, more especially by those occurring in Bramshill. Children are more prone to it than infants or adults, and are more likely to succumb to it than the latter; mainly, I think, from not having sufficient self-control to allow of remedial measures being used.

Some of the cases referred to prove how eminently exhaustive it is in its nature, and that apparent convalescence is not a sure forerunner of recovery. Of one thing I am convinced; to a considerable extent it is amenable to treatment, and still more to be prevented by hygienic measures.

Transactions of Branches.

CAMBRIDGE AND HUNTINGDON BRANCH.

ON THE TREATMENT OF WOUNDS AND PATIENTS AFTER OPERATIONS.

By G. M. Humphry, M.D., F.R.S.

[*Remarks made at the Meeting of the Cambridge Branch of the Association.*]

The treatment of wounds and patients after operations is a matter of so much importance, that I need no apology for bringing it under your notice. The following brief remarks being based upon the practice followed in Addenbrooke's Hospital, it is right to state that the patients are chiefly agricultural labourers, and, on the whole, favourable subjects for operations.

Tying the Blood-Vessels. We take a great deal of pains in securing the blood-vessels. We tie a greater number of small vessels than is, I think, usually done. The surface of the wound is rubbed rather smartly with the sponge, to clear away the clots and excite the vessels to bleed; for even considerable arteries, such as the radial, ulnar, and facial, may contract, or be covered by coagula, so as to escape notice, unless this be done; and then they bleed after the wound has been closed. The vessels generally bleed most freely at the time of the operation, and are likely to give most trouble afterwards, if they be not well secured, in thin irritable persons, in whom the pulse is quick and sharp, and when there has been much disease in the part operated upon. I performed amputation in the thigh in two young men on the same day. One of them was delicate, emaciated, with long standing and extensive disease in the knee; the vessels bled vigorously, more than twenty were tied; and there was secondary hæmorrhage, which recurred and recurred again, and, in spite of all our efforts, ultimately, proved fatal. The other patient was stout and healthy; the limb had been smashed by a thrashing-machine; the femoral artery alone required a ligature; and there was no subsequent bleeding.

Care should be taken to tie the great vessels *tightly*. This may seem a needless remark; but I lost one patient, as I had reason to believe, in consequence of the femoral artery not being tied sufficiently tightly. In another case, just before the wound was closed, I observed a slight leakage from the tied end of the femoral artery. Had not this been discovered, and the vessel been properly secured, hæmorrhage would, in all probability, have ensued. In a third case, I discovered, on sponging the wound carefully, a small orifice in the femoral artery, just above the ligature. In a case in which hæmorrhage proved fatal after amputation, I found, on dissection, a wound in the posterior tibial artery above the ligature. This had been made by the point of the knife in cutting the posterior flap, and had escaped observation when the ligature was applied. Hæmorrhage after operations is, I suspect, in most cases, attributable to the fact that the vessels have not been properly secured. When it takes place, at whatever period it be after the operation, my own experience coincides with that of most authorities upon the subject, that it is, as a general rule, the best plan to open the wound, search for, and endeavour to tie, the bleeding vessel.

We need not be afraid of using many ligatures, for they do very little mischief. They excite scarcely any irritation; they are collected in one or two bundles; and, by affording a drain from the depths of the wound, they do rather good than harm, and facilitate, rather than impede, the healing processes. It is not worth while to annoy the patient by pulling at the ligatures, during the subsequent progress of the case, for the purpose of ascertaining whether they be loose; it is better to leave them to be discharged from the wound, or gently to draw them away when they are quite separated. I have not ventured upon a trial of the newly proposed plan of compressing the vessels by needles.

Leaving the Wound uncovered. It is well known that wounds of the face commonly heal up, in their whole length, by first intention. This is due, in great measure, to the vital qualities

of the parts; and in some degree also, I apprehend, to the fact that they are usually left exposed to the air, their edges being held in contact merely by sutures. For some years we have adopted this plan after amputations and all, or nearly all, other operations. The integuments are united by sutures placed at intervals of about an inch; and the wound, as well as the adjacent surface, is left quite exposed to the air; no plaster, bandage, or dressing of any kind, being placed upon it. The advantages of this mode of treatment are very great. All the irritation, the galling pressure, the retention of heat, and other inconveniences resulting from bandages and plasters, are thus avoided. The edge of the wound and the surrounding skin being uncovered, the eye can take cognisance of what is going on; and we can cut a stitch here and there, when required, can keep the part clean, or take other measures without difficulty. Forasmuch as no dressings are applied, there are none to be removed. The suffering which used to be caused by the dressing of wounds after operations is got rid of. In many cases, I do not touch the wound, except for the purpose of removing the sutures, from the day of the operation; and several patients, who have undergone amputation under chloroform, have told me that, neither during the operation nor subsequently, did they experience any pain whatever. We decidedly have more frequent union by first intention than when we were in the habit of applying dressings to the wound. This not unfrequently takes place throughout the entire wound, except in the one or two narrow tracks where the ligatures pass, after amputation, and even sometimes after excision of joints.

Contrast this simple treatment and its results with the barbarous proceedings in the olden time, so vividly depicted by John Bell, when every wound was plugged to the bottom, and stretched wide open with dressings and acrid balsams, with tents and leaden syphons, when the patients were victims to murderous theories respecting the "digestion", the "mundification", the "incarnation", and the "cicatrisation" of wounds. Had such theories and such practices still prevailed, chloroform, by lessening the pain and dread, and increasing the number of operations, would have been a curse instead of a blessing. Happy is it that the discovery of the means of preventing pain during operations has taken place when so little pain is caused by dressings after operations.

We close the wound at the time of the operation, while the patient is still under the influence of chloroform. At one time, we tried the plan of leaving the wound open for some hours after the operation; but we did not find any especial advantage in it, certainly not enough to compensate the patient for the suffering and disappointment caused by our reappearing to close and stitch up the wound after he was in bed, when he was just beginning to recover from the effects of the operation, and to congratulate himself that he had escaped from our torturings.

If suppuration takes place, an early and free vent should be afforded to the pus, by cutting the stitches and opening the wound; and care should be taken to keep the wound clean. In this, a syringe is a very useful adjunct, which might be more frequently employed by English surgeons than it is. In Berlin, a syringe is always carried by the surgeon in his visits round the hospital, and is used by him to cleanse almost every wound and sore.

Water-dressing or poultices are sometimes required; and their influence, at times soothing, at others slightly stimulating, is often very beneficial. Commonly, I think, they are used too indiscriminately, and continued too long. They have a tendency to relax the parts, and appear to me to predispose, in some measure, to erysipelas. The quantity of poultice which is used in some hospitals is certainly remarkable, and might, I think, with great advantage, be diminished.

Large open wounds—that is, where portions of the skin have been removed, so that the edges cannot be approximated—are in our hospital, not unfrequently, left exposed to the air, without any covering. A dry crust or scab forms upon them, beneath which cicatrisation goes on; and we find that the healing often proceeds more quickly in this way than when the part is kept moist and the products of the wound are continually flowing away into the poultices or dressings.

Adhesive Plaster applied wet. When it is desirable to use adhesive plaster, you will find it an excellent plan to steep the piece of plaster in hot water before applying it, and to put it upon the part while it is moist. In this state, it can be adapted to the surface more accurately than when it is heated by the fire and applied in the usual manner, and it is decidedly less irritating. It soon dries, and, when dry, adheres well. This method is very convenient in the case of slight wounds of the hand; for, when the plaster has become dry, it forms a very effective protection. It often remains on for days, in spite of repeating washing of the hands. We find the wetted plaster of great service in the treatment of sore legs, swelled joints, and other cases where pressure is required, as well as in the management of wounds. Indeed, in almost all the instances in which I use adhesive plaster, I steep it in hot water, instead of heating it by the fire.

Treatment of the Patient. The class of patients who are admitted into Addenbrooke's Hospital, for the purpose of undergoing operations, do not commonly require much preparatory treatment. They are kept in the house for a few days, upon regulated diet, before the operation; but, as a general rule, they do not take any medicine.

Opium seldom given. After the operation, also, very little medicine is given. I rarely find it necessary to have recourse to the use of opium after operations, and cannot but fear that much mischief is, at the present time, done by the routine and too indiscriminate administration of this drug in such cases. Besides its influence upon the stomach and bowels, it enervates the patient more or less, and is liable to be followed by a depression and relaxation of the system, and by an increased restlessness and intolerance of pain when its sedative influence has passed off. Let it not be thought that I have any prejudice against the use of opium. I believe it to be one of the most valuable, if not the most valuable, of our medicines; but all will acknowledge that it has its evil effects, and these appear to me to be more prejudicial to the patient than is the certain amount of discomfort or pain, of restlessness and sleeplessness, which are usually experienced after an operation, and which the opium is intended to allay. Such symptoms commonly subside after a few hours, without artificial assistance; and the return of repose and appetite, and of the healthy performance of the several functions, takes place, as a general rule, most quickly when the natural course of things has been least interfered with. I do not mean to say that I never give opium after an operation, or that I never see good results from it; but I must confess that not unfrequently, when I have given it, I have regretted that I did so, and have thought that the sleep it gave was barely a compensation for the other effects which it induced. I am scarcely disposed to make an exception to these remarks even in favour of those cases in which it is most strongly recommended, viz., where the operation has involved the abdominal cavity. After the operation for hernia, I seldom give opium in the first instance, though I am in the habit of resorting to it if symptoms of inflammation continue.

Diet not too stimulating. The diet is regulated according to the requirements of each case. Patients of the agricultural class do not commonly need much stimulus, though a few need that it should be given freely from the time of the operation. Of late the tide of feeling has set, I think, somewhat too strongly in favour of a stimulating method of treatment in surgical as well as medical cases. Some years ago, it was too much the rule to keep patients on low diet, and further to reduce their strength by bleeding, purgatives, and other deplotory measures. The evils of this have been perceived and largely expatiated on; and we have been driven, as usually happens under such circumstances, somewhat too far in the opposite direction. Many are so beset with the idea of "keeping up" their patients by brandy, wine, beef-tea, etc., that it is to be feared they sometimes effectually keep them down; in other words, the patient's stomach and system are apt to be so overloaded and oppressed by the amount of stimulus and food exhibited, that the natural rallying and reparative powers are not allowed fair play. It is quite probable that the modern treatment in this respect is, for many reasons, better suited to the inhabitants of the metropolis and large towns than to the agricultural population; but I think the tendency is to push it too far in both classes of patients.

I am glad of this opportunity to raise my voice against the too indiscriminate adoption of the "opiate system" and the "keeping up" system. I am convinced that greater moderation with regard to both, combined with more careful consideration of the requirements of each particular case, without reference to prevalent theories, and a more unbiassed observation of the effects of medicines and diet upon our patients, would lead to a diminution of feverishness, erysipelas, so-called pyæmia, and other untoward consequences, and would tend materially to brighten the statistical page of operative surgery.

The following are the results of the operations of lithotomy, performed by myself; and of amputation in the thigh and leg, performed by my colleagues, Mr. Lestourgeon and Mr. Hammond, and myself.

Of the high operation of lithotomy, one case;* the patient recovered. The lateral operation I have performed seventy-seven times. Six patients died, or 1 in 12¼. Thirty-five of the patients were adults; of these, four died, or 1 in 8. Forty of the patients were under twenty years of age; of these, two died, or 1 in 20.

There have been 150 cases of amputation in the thigh and leg, including one at the hip-joint, which recovered.† Twenty-three patients died, or 1 in 6½.‡ Twenty-one were primary amputations after accident; of these, six were fatal.

SOUTH-MIDLAND BRANCH.

CASE OF TRAUMATIC TETANUS CURED BY CHLOROFORM.

By HAMMETT HAILEY, Esq., Newport Pagnell.

[*Read at Newport Pagnell, October 12th*, 1860.]

J. W., a boy about 10 years of age, received a lacerated wound of the left hand from a chaff-machine, tearing off half the index-finger, and partially severing the little one. The little finger I endeavoured to cause to unite by the first intention, by bringing the lacerated parts together, and strapping them up. All went on well until the third day, when a fœtid discharge took place from the wound in the little finger. On taking off the strapping, I found no intention in the parts to unite, but a great disposition to gangrene; I therefore removed the loose portion of finger, and employed the resin cerate and poultices.

Two days after I had commenced this treatment, the boy complained of his general health; and I found on inquiry that he had exposed himself for some time to a very cold wind, with little or no covering to his hand. The wound on the index-finger now looked discoloured with unhealthy granulations; that on the little finger was much worse. He complained of loss of appetite, pains in the muscles of the arms, stiffness, and rigors, accompanied by vomiting and violent pains in the spine. I now ordered him to be kept in bed, and his hand to be constantly bathed with warm water; and administered Dover's powder every four hours, with saline medicine.

All these symptoms increased rapidly, accompanied now with convulsions of a tonic character. The vomiting increased, therefore preventing me from giving much medicine or nourishment by the mouth. I administered opium in large quantities both by the mouth and by enema; but without any mitigation of the disease. The rigidity of the abdominal muscles I endeavoured to relax by terebinthinate and opiate liniments; but all to no purpose.

In about five days from the time I first noticed tetanic symptoms, opisthotonos set in with great violence, accompanied by so much tetanic convulsion of the muscles of the throat and larynx, that, although there was but little trismus, deglutition was almost prevented; and, when it was accomplished, it apparently suffocated the patient. The vomiting continued, with the convulsions; and, although the doses of opium were much increased, the disease still progressed in violence. I should say that about the seventh day of the attack the boy had a violent convulsion every four hours, attended with great pain; his head was drawn back; his spine was so much bent, that the feet appeared to incline into the middle of the spine; and the muscles of the abdomen were as hard as a board; but the mental faculties appeared clear; and the pulse was extremely rapid.

Having noticed the power of chloroform in relaxing muscular rigidity in cases of midwifery, I determined to give it a trial in this case. I therefore visited the patient, and waited until a convulsion came on. I then took a handkerchief, formed a cone, and put about two drachms of chloroform into it. I placed this over the boy's nose, keeping a guard upon the mouth. After it had been applied for about a minute, the patient appeared to dose, and the muscles to be relaxed. The legs were first affected, and, from being bent, became straight; and the abdominal muscles became more relaxed. On the cessation of the convulsion, he was able to swallow; and I administered large quantities of beef-tea and gruel. The next attack did not make its appearance quite so soon. I now instructed the nurse how to administer the chloroform; and it was repeated upon the recurrence of every convulsion. Each time it answered the purpose; and on the termination of the convulsion, the patient took plenty of nourishment. The convulsive attacks became gradually less frequent, until they only returned every other day; the patient being quite freed from them as his general health was restored. I may state that perfect anæsthesia never took place.

REMARKS. Since the introduction of chloroform, the medical journals have from time to time given us a case or two of tetanus successfully treated with chloroform. I have no doubt that an equal number of unsuccessful cases can be found; but whatever is the state of statistics on this point, one thing is certain, this case well illustrates the power of chloroform in controlling tonic spasm in tetanic convulsions. This power is exercised in proportion to the age and habits of the patient; intemperance, in my experience, being an insurmountable obstacle to the due administration of chloroform, as recent cases have fully corroborated. This boy's age, and the absence of this great obtruding cause, viz., intemperance, rendered him a proper subject for experiment. The presence of vomiting prevented me from pushing the opiate treatment to any great extent; for I must admit that, from experience in previous cases of tetanus, opium has been my sheet-anchor. In the year 1855, a case of traumatic tetanus came under my observation. The patient was a man of intemperate habits; the convulsion of the muscles about the throat and larynx was not great; and there was an absence of vomiting. In this case, opium, carried to the extent of from eight to ten grains in the twenty-four hours, reduced the spasms; and, in the absence of the convulsions, the patient took nourishment. He ultimately recovered; but the congestion in the various internal organs, resulting from the use of this drug, required energetic after-treatment, and so prolonged his recovery. Chloroform in the case of J. W. seemed to allay the spasms, without producing any effect upon the internal organs; for the bowels acted with regularity, the brain was unaffected, and the bladder acted spontaneously on the cessation of each convulsion. Some years ago, in a case of idiopathic tetanus attended with trismus and opisthotonos, I was struck with the wonderful power galvanism possessed in subduing tonic spasm; but this remedy was attended with many inconveniences. In the first place, much time was lost in arranging the apparatus; and it could not be well employed, except by, or in the presence of, the medical attendant. Secondly, its influence did not extend to the whole system, but only to the parts to which it was more immediately applied. Thirdly, each shock appeared to exhaust the patient; therefore frustrating the great object in view in cases of convulsions, viz., supporting the system between the attacks.

In conclusion, I think I may safely state, from my experience in this case, and from information received from other sources, chloroform will be found, if not a curative, a valuable agent in the alleviation of the tonic spasm of tetanus, from its power of allaying muscular spasm and nervous excitement, without producing derangement of the excreting or secreting organs, so commonly the case in the employment of opium or Indian hemp, and even of large doses of quinine.

When trismus is present, all the above remedies cannot be given; but inhalation can be proceeded with without inconvenience.

* The case is related in the *Transactions* of the Provincial Medical and Surgical Association, vol. xvii, page 103.

† See ASSOCIATION MEDICAL JOURNAL, January 19th, 1856.

‡ "The general result of 640 amputations in the leg and thigh, for accident and disease, performed in the London and Provincial Hospitals, shows a fatality of one in three." There was not much difference in the rate of mortality between the London and the Provincial cases. (Teale *On Amputation*, page 7.)

Reviews and Notices.

ON MYALGIA: ITS NATURE, CAUSES, AND TREATMENT: being a Treatise on Painful and other Affections of the Muscular System, which have been frequently mistaken for Hysterical, Inflammatory, Hepatic, Uterine, Nervous, Spinal, or other Diseases. By THOMAS INMAN, M.D.Lond., Member of the Royal College of Physicians, London; Physician to the Liverpool Royal Infirmary; etc. Second Edition. Pp. 307. London: Churchill. 1860.

THIS is a new edition of a work published by Dr. INMAN about two years ago on "Spinal Irritation;" in which the author endeavoured to point out that many of the cases of disordered sensorial function, commonly attributed to spinal derangement and hysteria, were in reality instances of an inordinate sensibility of the muscles. Since the publication of that work, he has continued his observations, and has from time to time published in the pages of this JOURNAL the conclusions to which he

has been led. On the present occasion, he has incorporated into a volume his views in the state of development which they have already reached; and, setting aside the term "spinal irritation," or rather making but secondary use of it, he places *Myalgia*, or muscular pain, prominently forward as the exponent of many phenomena which often simulate other affections—even serious diseases of internal organs.

The author, in giving the diagnosis of muscular pain, lays down the following points, not as absolutely perfect, but as approaching as nearly to correctness as is possible in the present state of knowledge.

"1. In describing the pain, the patients almost invariably press their hand upon the affected part; sometimes they pat it with the finger, or the fleshy part of the wrist; most commonly they lay the open palm upon it, push the hand forward, and raise it up, so that the wrist leaves the surface last. Though the patient herself taps the spot, she shrinks if the doctor should attempt to do so. This seems, to me, to be a pathognomonic and certain sign.

"2. The pain is spoken of as wearing, aching, burning, or 'hot'; it is occasionally spoken of as a 'soreness', or a 'weakness'.

"3. In labourers and others who have much bodily fatigue for six days, and a perfect rest on Sunday, the pains are always better, if not absent, on Monday morning, and very bad on Friday and Saturday. The same cannot be said of domestic servants, or housewives.

"4. As a general rule, the pains are absent in the morning, begin about noon, and increase in severity up to bedtime. They commonly cease entirely when the patient lies down in bed. In bad cases, they are only relieved by the recumbent posture.

"5. When they follow excessive exertion of muscular power, they are present when the individual awakes, and continue with diminishing intensity for a varying period. The pains are persistent, more or less, according to the amount of exertion used, and whether the kind of exertion is one the patient is unaccustomed to.

"6. The pain is commonly attended with superficial tenderness, which often exists to such a degree that even the contact of the clothes is almost unbearable, and the patient will flinch, and sometimes scream at the lightest touch; notwithstanding this, steady, sustained, and equable pressure, gives marked relief.

"7. The pain is not referred to parts where nerves are abundant.

"8. It is referred to some part of a muscle or set of muscles, the fleshy part or the fibrous insertions, and is aggravated considerably by bringing the affected parts into active operation. It is important to note this fact; for I have known many patients declare that their pains were as bad when they were in bed as when they were up. A remark like this seems antagonistic to the fourth point in the diagnosis. It is, however, reconciled with it at once when it is ascertained that the pain is absent when they lie perfectly still, but that it comes on again every time the patients move in bed.

"9. The pain can be traced to unusual exertion in a strong person, or to a weak muscle having to do the work of a strong one. I do not know any point in the diagnosis that requires a more ready power of appreciation than this.

"10. The pain is relieved by relaxation of the muscular or tendinous fibres, or by artificial support. The assistance which this observation gives to the diagnosis is immense; though, as may readily be understood, it is not always available.

"11. However severe the pain, the pulse is unaffected in frequency, although it may be softer and weaker than natural. But, if the exertion producing the pain has been excessive and exhaustive, as in parturition, the pulse is commonly very rapid and usually small, and feverishness may be present.

"12. The patient, in describing the seat of pain, when it is extensive, almost invariably, though of course unconsciously, moves the hand in the direction of the fibres of the affected muscles.

"13. The pain of cramp often comes on suddenly during the night, while the patient is moving.

"14. In forming the diagnosis of muscular pains (myalgia), I would strongly caution the observer not to be led away by any false appearances of health and strength in his patient, and thus fall into the error that no intrinsic weakness can possibly be present. Appearances are proverbially said to be deceptive, and they certainly are so in a medical point of view. I am at the present moment familiar with many ladies whose ruddy countenance, cheerful manner, active habits, and embonpoint, impress a hasty observer with the notion of rude health, robust strength, and superfluity of blood. Some of them have already suffered much from this fallacious estimate, and have been bled, leeched, blistered, and kept on low diet, when they required in reality the most nutritious food, and the strongest tonics that could be procured."

It may, perhaps, be said that, with much that is true, Dr. Inman is carrying his views to an extreme. But there is very much of sound sense in what he says; and therefore we would impress on all practitioners to become acquainted with and to carefully test his opinions; both because the valuable hints derivable therefrom may not unfrequently help them to solve difficulties of diagnosis, but also because from the collision of ideas and comparison of facts, that which exceeds the bounds of correct reasoning may be retrenched, and that which is deficient may be filled up. As Dr. Inman truly says in his preface, "many of our most cherished notions respecting the nervous system" (and its disorders) "require remodelling." If Dr. Inman succeeds in satisfactorily performing this task, and in giving a definite form to many of our confused ideas, he will have gained no small glory to himself among the physicians of the present age. The promise he makes is good; and our hopes from him are not small.

British Medical Journal.

SATURDAY, OCTOBER 27TH, 1860.

GRATUITOUS MEDICAL SERVICES.

The question of gratuitous medical services, like all other questions strictly bearing upon the interests of medicine, has been a long time fixing itself upon the professional mind. It has loomed upon us energetically at times, in the shape of leaders in the medical journals; and then as suddenly has disappeared. Medical men have so cheerfully submitted to give the best hours of their daily labour to the service of the afflicted, that they half hesitate to proclaim that the labourer is worthy of his hire. Indeed, it is not at all uncommon to find some of our brethren totally denying that we ever give anything for nothing, and unhesitatingly declaring that the pecuniary benefit resulting from being ranked upon the staff of a hospital is sufficient compensation for the time occupied in hospital duties. It would not be difficult to prove that this is a total error. If only young and inexperienced men were found ready to accept these posts, there might be some show of truth in the argument; but it must be remembered that a primary condition of success in a candidate for such an appointment is that of being in some degree already celebrated in his profession. A nameless man, unless, indeed, he have some hereditary claim, has as little chance of carrying off a medical or surgical appointment in any of our great hospitals, as he would of being crowned king. In the majority of cases, the surgeon reflects credit upon the institution he serves, rather than gathers from it a borrowed lustre. Such being the case, it can scarcely be asserted that any benefit his name receives by being associated with a hospital is at all adequate to the value of his midday hour.

But, even granted that the medical officer gets his *quid pro quo* in the shape of position, in return for his gratui-

tous services, we may fairly ask if that is all he is entitled to. Do we ever hear of lawyers serving their fellow-creatures gratuitously? And yet there must be plenty of lawyers who acquire position simply in consequence of the legal offices they fill. The fact is, the public from time immemorial have been accustomed to pay lawyers well for the slightest service, and they have not been accustomed to pay the medical man; and this tyrant custom is the only argument that can be used for the maintenance of a great and crying injustice exercised towards our profession. The public pay liberally the chaplain, the steward, the matron, and the nurses of the great medical institutions, but put their hands in their pockets when the chief officers are concerned—it is, in short, the play of *Hamlet* with the part of Hamlet left out by particular desire.

It may be asked, how far we ourselves are to blame for a state of things so unjustifiable. Are there not many in the profession whose wealth renders them perfectly independent of any money payment, who rather applaud a condition of things which is calculated to keep very poor men, however able they may be, out of the offices they monopolise? We fear there is much latent thought in this direction. If the posts of medical officers at our great hospitals were valuable in a pecuniary point of view, may we not anticipate that a large infusion of the philosophical element would be found in their staffs? In place of the discreditable scamper through the wards we sometimes witness, in order that a consultation and a heavy fee for some private patient may be pocketed, may we not hope to see at least a few men who, contented with a moderate recompense, would be ready to devote their lives to the study and treatment of disease in the hospital? It must not be supposed that, in saying so much, we desire to advocate the employment there of mere theoretical men, as these institutions are intended as study places for the practical members of the profession, as well as for the cure of disease; but we do think that we have practical men enough among us, and that nothing would be lost by a system which should encourage a few philosophical minds to consider the hospital as their great battle field, and pure science as their steady aim, to the neglect of mere fee taking.

If the abolition of the present system of gratuitous medical services only did so much for our profession, we should consider that it would be an object well worth struggling for; but we claim just payment for our public services as a right upon which we should insist. The public and the parliament have been so long accustomed to find us willing to work for nothing, that they invariably thrust fresh gratuitous work upon us whenever they have an opportuuity. Thus we are forced to sign certificates of deaths, and asked to answer all kind of impertinent questions by insurance offices. Against such an increasing injustice it is high time that we made a determined stand. Hitherto the mischief has been that what is everybody's business is nobody's business, and hence all attempts to rouse the profession have been confined to evanescent articles in the medical journals. We are glad to be able to announce, however, that some leading medical men have associated themselves, under the name of the Medical Literary Society, for the discussion of matters bearing upon the welfare of the profession, and that one of the first subjects they have resolutely taken in hand is the question of gratuitous medical services. At a very interesting meeting, held on the 22nd ult., at the house of the President, Dr. Winslow, it was moved by Dr. Sieveking, seconded by Dr. Barnes, and resolved,

"That the Society approves the principle of payment to medical officers in public institutions, and pledges itself to promote the abolition of unpaid offices by all legitimate means."

The Society are prepared to follow this motion up by vigorous measures calculated to obtain the object they have in view, and we most heartily wish them success in their undertaking.

THE WEEK.

WE are glad to find that the appointment of analysers is being made in many places throughout the country, under Mr. Scholefield's new Bill for the Suppression of Adulterations of Food. We perceive that Dr. Letheby has been appointed to be the public analyst of food and drinks purchased in the City of London. At the last meeting of the Court of Common Council, the following conversation took place with reference to the manner in which the Act is to be carried out, in which we are sorry to see that a member of our own profession took a less comprehensive view of the intentions of this measure than did a layman of the Council.

"Mr. Daw, the clerk to the Court, read a letter he had received from the Home Secretary approving the appointment by the Court of Dr. Letheby to be the public analyst of food and drinks purchased within the city of London under the Adulteration of Food Prevention Act, which recently passed into a law. Deputy Lott asked whether it was the intention of the Court to take any further action under this excellent public Act than the appointment of Dr. Letheby as the analyst, and whether they meant to give him any definite instructions as to the making of analyses under its authority. The Chairman said the Committee of General Purposes, to whom the subject was referred, reported strongly in favour of adopting the Act. The Court, upon that report, elected Dr. Letheby as the analyst, and empowered the committee to supply the necessary apparatus and to carry the Act into operation. Dr. Abraham said it was the duty of the Court to provide all the requisite machinery, and, having done that, and appointed a competent analyst, their functions under the statute would cease, and it would then remain with the public to avail themselves of the protection it was intended to afford, or to allow it to be a dead letter. Deputy Lott held that it rested with the Court, as the representative body of the citizens in this matter, to afford every facility for putting the act in force, and if they did their duty in that respect, instead of merely looking passively on, the public, and especially the poor, might before long expect that the food and drink they bought had some claim to be considered genuine."

A new medical periodical has been recently started in Berlin, under the title of *Archiv für Klinische Chirurgie*. It is under the management of Professor B. Langenbeck, aided by Dr. Billroth of Zürich and Dr. Gurlt of Berlin—all three being public teachers of surgery. The first part, which is before us, contains the following articles:—Contributions to the Surgical Pathology of the Veins; by B. Langenbeck: Fibroid and Sarcoma in their chirurgo-pathological Relation; by Dr. H. Senftleben: Observations and Experiments on Resection of the Hip-joint; by Dr. C. Fock: Practical Contributions to the Operation for Hare-lip; by Dr. Danzel; Remarks on Osteotomy of the Hollow Bones; by Dr. Danzel: Cases of Ozæna cured by Creasote; by Dr. Wetzlar: Deformities of the Foot dependent on Defects in the Bones; by Dr. Th. Billroth: Case of Urinary Calculus outside the Urinary Passages; by Dr. Weyrich. There are also several lithographic plates.

Association Intelligence.

VACANCY IN THE EDITORSHIP OF THE BRITISH MEDICAL JOURNAL.

As the office of Editor of the British Medical Journal will become vacant on the 31st of December next, it is requested that all candidates for the appointment will communicate, not later than the 17th of November, with Dr. Williams of Worcester, and forward to him, with their testimonials, the scheme they propose for conducting the Journal.

Charles Hastings, Knt., M.D., etc.,
President of Council.

Worcester, October 23rd, 1860.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

Monday, October 22nd, 1860.

Peter Marshall, Esq., in the Chair.

CLINICAL DISCUSSION.

Curious Malformation of the Anal Region. Mr. Canton related the case of a child brought to him with the skin at the posterior margin of the anus turned forwards, and attached along the raphe of the perinæum as far as the scrotum. The child had never been able to retain its fæces. The anus was not so covered completely but that an opening was left on each side. The malformation might be compared to a sort of dog's tail turned up between the legs. Mr. Canton had not seen any similar recorded instances.

Dr. Salter asked if the growth was examined, and especially the coccyx.

Mr. Canton has found nothing wrong, except perhaps an imperfect development of the sphincter ani.

Indiscriminate Use of Opium. Dr. Stocker made a communication referring to the necessity of legislative interference in the sale of poisons. He had been attending a lady aged 35, who suffered much pain, for which, it was said, opium plaisters were applied. Dr. Stocker found out, however, that large quantities of opium had been procured from a druggist, and taken at the rate of four hundred and eighty grains a month. The motor power of the upper limbs was impaired; but it had improved on her leaving off the use of the drug.

Is Mercury an Hepatic Specific? Dr. Thudichum said that since he touched upon this question, in his recent paper, a communication had been published by Dr. Inman, of Liverpool, which so clearly exposed the fallacy of the current notions about the relationship between mercurials and the liver, that he was induced specially to draw attention to it. Dr. Inman has spoken Dr. Thudichum's ideas of the subject, but on some points he was enabled to correct or amplify his information.

1. That mercury does not make its appearance in the bile when given in the form of calomel, has been proved by Mosler (Virchow's *Archiv*, vol. xii, p. 29). Doses of from twenty-two to fifty-two grains produced no appearance of mercury in the bile, neither was the quantity of bile secreted thereby augmented. If Dr. Thudichum recollected right, an author in India, writing in the *Lancet*, attempted to controvert the facts of Mosler, and stated that he had found mercury in the bile. Even if that should be so in some cases, there remains the fact, nevertheless, that the quantity of bile is not increased by that agent.

2. H. Nasse, Kölliker, and H. Müller found that the addition of calomel to food, which under ordinary circumstances produced a certain and normal quantity of bile in dogs, diminished the quantity of bile.

3. Taking into consideration three experiments of Kölliker and four of Scott's, related in Beale's *Archives*, Dr. Inman comes to the conclusion, that the chances are six to one that calomel will diminish the hepatic secretion. The facts Dr. Thudichum had stated made the proportions worse. In nine cases out of ten, calomel, whether it purges or not, will diminish the quantity of bile secreted. Where it acts as a purgative, the diminution is most conspicuous.

4. Dr. Thudichum had allowed that mercurials, particularly calomel, by their purging action, might relieve some disorders of the liver or other organs, or of the general system. This effect could be purchased at less cost by other purgatives, because the specific action of mercury was always hurtful, excepting, of course, in cases of syphilis. The mere fact, therefore, of cases of liver disease having been improved by the action of mercurials, is no proof of their specific advantage.

5. The stools which are passed after the use of purging mercurials, particularly calomel, are supposed to contain more bile than usual. This assumption rests upon the observation that these stools are mostly green—a fact which appears to me to be at the bottom of the entire tissue of errors. The green colour of calomel stools is due to subsulphide of mercury, just as the black colour of stools following the use of preparations of iron is due to subsulphide of iron. The subsulphide of mercury can be easily obtained from those stools by levigation, or chemical proceedings. So much is proved. On the contrary, it is not proved that calomel stools contain any increased quantity of either bile or biliary colouring matter (cholochrome.) From the experiments quoted above, the reverse of this unproved hypothesis will probably be found to be true—namely, that the green calomel stools contain a smaller amount of biliary colouring matter than an equal amount of solid matter from healthy fæces. When the fæces passed after a dose of calomel or blue pill become green, they also begin to scald the anus. This sensation has been ascribed to the bile, which was then believed to be passing. It is only reasonable to ascribe this scalding, not to bile, which is not present, but to the subsulphide of mercury, which has been proved to be present.

6. Dr. Inman adopts the estimate of the quantity of bile discharged by a man of 160 lbs. weight, in twenty-four hours, as sixty-six ounces. The most accurate calculations from experiments upon animals permit me to assume that an adult person secretes between 195 and 675 grains of solid matter through the biliary channels. The amount of solid matter contained in human bile varies between eight and sixteen per cent. It therefore follows that the amount of average bile secreted by an adult in twenty-four hours fluctuates between 1200 and 9000 grains; or 2 oz. 240 grs., and 18 oz. 360 grs.—a vast difference from 66 oz. But substituting these figures for those given by Dr. Inman, and assuming the fæces to weigh half a pound instead of a pound (the dry residue of a healthy man's fæces does not usually exceed two ounces), Dr. Inman's subsequent conclusions become still more correct.

7. Dr. Inman assumes that the clayey, white stools of persons suffering from jaundice, might contain the ingredients of bile minus only the colouring matter. This has not been proved to obtain. As, on the other hand, it has been proved that the healthy fæces contain no biliary matter except a derivate of cholochrome, Dr. Inman's assumption becomes very improbable, and the reverse opinion gains ground, that the clayey, white stools of the jaundiced contain neither bile, acids, nor cholochrome. Dr. Thudichum was far from admitting, as a reliable fact, that the liver may secrete colourless bile. He would not admit that in jaundice the colourless part of the bile could go into the intestines, while the coloured part passes into the blood. With regard to these points, he differed entirely from Dr. Inman, not because he thought that such might not occur, but simply because no such occurrence has been proved.

8. He took the opportunity to point out that the question of the discharge of any modified biliary matter besides cholochrome in the fæces requires further study. The ordinary biliary salts are certainly not present; the fæces contain little soda. But some modified cholic acid might still be contained, and escape observation, as it had hitherto done in gall-stones. According to Berzelius, five ounces of fresh excrements contained twenty-one grains of a matter similar to bile. Considering that 675 grains is the maximum, and 195 grains the minimum of solid bile, any modified cholic acid in the fæces could not be less than three, nor more than ten per cent. of the bile secreted in twenty-four hours.

Dr. Salter supposed that Dr. Thudichum was aware how far his estimate of the daily quantity of bile fell short of other analyses—as that of Bidder and Schmidt.

Dr. Thudichum replied, that the quantity of the solid biliary matter must be estimated, and not merely the quantity of bile, which varied in its density in different localities. He had consulted all authorities on the subject of the quantity of bile, besides making observations for himself. The former estimates have been all very much overstated.

Mr. Rogers-Harrison asked, if so much bile as fifty-four or sixty-six ounces is secreted, what becomes of it?

Dr. Richardson said that the bile was taken up again and used in the system. The animals experimented on by Bidder and Schmidt died of inanition.

The Chairman asked how Dr. Thudichum accounted for the difference between the colouring of the stools of children and those of adults.

Dr. Halford had been called to a gentleman who had had an attack of diarrhœa, and who complained of the fæces coming from him "like barley water"; but he had taken no mercury. He (Dr. Halford) had also felt the sensation unconnected with mercury. He did not think it was dependent on the presence of subsulphide of mercury, as Dr. Thudichum imagined.

Dr. Camps thought that, if Dr. Thudichum's views were proved correct, a great benefit would be conferred on the public.

Dr. Thudichum thought that children were more easily purged by mercury; and hence it did not produce so much its specific results on them. Of course it would be rash to put down every case of burning sensation in purging as arising from subsulphide of mercury. He recommended again the perusal of Dr. Inman's paper, as he believed that a more rational paper on the subject had never been written.

Excision of the Elbow-Joint. Mr. De Méric brought forward a man whom he wished to exhibit, because he thought the case not very brilliant. About ten months ago, the man came under his care with diseased elbow, which he had had for two years. Resection was performed. It is generally stated that the free use of the arm is regained; and Mr. De Méric had seen one or two cases in which the result was pretty satisfactory. Those in whom the operation has been performed generally work their arms from the shoulder, while the forearm moves but little. Mr. De Méric said that there was certainly this gain; the man had his arm, and had regained his health. The head of the radius was not removed; but the olecranon and the coronoid process of the ulna were excised. [The patient was exhibited to the Fellows present, most of whom appeared to regard the amount of motion possessed as very fair.]

Dr. Halford asked why the arm could not have been put up in the bent position.

Mr. Canton was rather surprised at Mr. De Méric's bringing forward the case as one of imperfect success. He believed the man had a large amount of power in the limb, and that it would be increased in time by passive motion, and when the sores are healed. He thought the case as good a one as he had ever seen.

Dr. Thudichum had seen several cases of excision of the elbow-joint in the Schleswig-Holstein war. The utility of the joint depended on the removal of a proper amount of bone—neither too little nor too much.

Mr. Bryant confirmed the observation of Dr. Thudichum, and thought that the leaving of the head of the radius in Mr. De Méric's case had to some extent limited motion. He thought, however, the case a very favourable one. But, after all, the preservation of the hand was the principal object in excision of the elbow-joint.

The Chairman asked whether any dissection had been made of the parts in favourable cases.

Mr. Canton said that our chief knowledge of the subject had been derived from experiments on animals.

Three Cases of Ovarian Dropsy Cured by Tapping and Pressure. Mr. Brown related the following cases of ovariotomy successfully treated by the application of pressure:—

Case I. Mrs. C., aged 36, married, was admitted into the London Surgical Home, July 21st, 1859. She was sent to Mr. Brown by Dr. Jackson of Sheffield. During the last eight or nine years, she had been constantly subject to severe dyspepsia, with painful and irregular menstruation, and at the catamenial periods to considerable enlargement of the abdomen. She had been married ten or twelve years, but had never been pregnant. About three years before admission, she observed a swelling, attended with severe pain, in the lower part of the abdomen, on the left side: the tumour gradually enlarged up to the period when she saw Mr. Brown. Diuretics and resolvents had been administered for many months without the slightest benefit. On examination, Mr. Brown found a distinctly fluctuating tumour on the left side, evidently ovarian and unilocular. On August 1st, he tapped her in the semilunar line; and between three and four pints of sero-sanguineous fluid escaped. Pads and flannel bandages were firmly applied. This was kept up for a month, when she returned home. Mr. Brown saw her three months afterwards at Sheffield, with Dr. Jackson and Mr. Pearson, when he found her perfectly well; and, upon examination, could distinctly feel the puckered up cyst in the left iliac fossa. Dr. Jackson had lately written to Mr. Brown, to state that she is perfectly well, without any return whatever of the disease.

Case II. E. S., aged 21, single, was admitted July 23rd, 1859. Three years ago, she first perceived a swelling in the left side, which gradually increased. On examination, an unilocular ovarian cyst was diagnosed. On August 4th, she was tapped in the semilunar line; and nine pints and a half of a pale, thin, and slightly albuminous fluid were drawn off. Immediately bran pads were applied, and firmly secured by nine yards of flannel bandage. On October 4th, the pressure had been steadily continued up to this period, when the most careful examination could detect no fluctuation. From this time she steadily improved in health, and continued as a nurse for nine months in the institution. She is now in service, and perfectly well.

Case III. S. D., aged 36, single, residing in the country, was admitted October 7th, 1859. She had been ill six or seven years. The catamenia had always been regular. The abdomen gradually began to fill; and for the last six months it had rapidly increased. She had never suffered much inconvenience beyond the weight, her general health being good. An unilocular ovarian cyst was diagnosed. On October 22nd, she was tapped, whilst in the horizontal posture, on the left side, and thirty-two pints of a pale, thin, and slightly albuminous fluid were evacuated. Immediately very firm pressure was made with pads and flannel bandages. She complained a little of the pressure for the first twenty-four hours, but afterwards got accustomed to it. This was kept up for one month; when one of Mr. Brown's ovarian bandages was applied. She returned to the country quite well, and has continued so up to the present time.

These two cases were considered fit for the trial of this simple mode of treatment, which Mr. Brown first advocated as far back as 1844. Time and experience have satisfied him that such cases as these three now detailed ought always to be so treated in the first instance; that the padding and pressure require very careful application, and, when so applied, *can* produce no ill effects; and that therefore objections on this score arise from ignorance of the mode of application.

Mr. De Méric thought the carrying out of pressure would be of good service, if it could be shown that it would prevent the necessity for so formidable an operation as ovariotomy.

Mr. Brown stated that experience had taught him, that bran pads, made according as circumstances required, carefully applied, and bandaged, answered all purposes, and produced a perfectly even pressure without pain. Many gentlemen had since successfully applied this treatment, especially Dr. Tanner, who had recorded cases of cure; but that gentleman had made no mention of pain or inconvenience caused to the patient by the application of the bandage. Mr. Brown, therefore, thought that the strongly-worded statements, made by others, as to the tortures to the patient and the cruelty of the application, were without fact, and only arose from ignorance of the method of application. As regarded recurrence of the disease, although in the cases Mr. Brown had just read, they had only been operated on a year; still he had had many which had stood the test for a much longer time with an equally beneficial result. Mr. Brown mentioned the case of a lady, who, when operated on, was single, but had since married and been confined of three children by Mr. Brown himself. Again, as a *substitution* for *ovariotomy*, Mr. Brown could not recommend it; except in unilocular cases, the proportion of which to multilocular is exceedingly small. In the latter, when they fail to yield to the injection of iodine and other methods recommended, and when death is staring the patient in the face, Mr. Brown saw no alternative but ovariotomy. This operation was still undergoing a trial, but he considered it as successful as most other capital operations, and perfectly justifiable.

Pedunculated Tumour removed by Torsion. Mr. Bryant exhibited a pedunculated tumour removed from the outer side of the thigh of a woman by simply twisting it on its own peduncle, and securing it by strapping. In the course of a week, it sloughed away.

The Chairman had called the late Mr. Liston to a case of tumour on the sole of the foot, which he had removed in a similar manner.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

** In these lists, an asterisk is prefixed to the names of Members of the Association.*

BIRTHS.

Of sons, the wives of—

*Dill, Richard, M.D., Brighton, on October 18.

Duncan, Thomas, M.D., Richmond, on October 17.

*Gillard, Richard, Esq., Hovingham, Yorkshire, on Oct. 21.

Horner, Thomas, L.R.C.P.Ed., at Stoke Newington, on October 21.

Of daughters, the wives of—

Bremner, Bruce A., M.D., at Bridge of Earn, Perthshire, on October 22.

Croft, Robert C., M.D., Camden Road Villas, on October 20.

Davies, John, Esq., Surgeon-Major Royal Army, at Reading, on October 23.

Marshall, Peter, Esq., Surgeon, Bedford Square, on Oct. 17.

Munro, William, M.D., Surgeon 93rd Highlanders, at Rawell Pindee, India, on September 4.

*Ormerod, Edward L., M.D., Brighton, on October 17.

Smith, Charles S., Esq., Surgeon, Burbage, Wilts, on Oct. 14.

Thompson, Charles T., M.D., Sussex Gardens, on October 18.

MARRIAGES.

Bartleet, Horace, Esq., of Adelaide, Australia, to Lucy, fourth daughter of *John W. Wilton, Esq., of Gloucester, on October 16.

*Bromfield, John, Esq., Whitchurch, Salop, to Mary T., daughter of John Briscoe, Esq., West Derby, Liverpool, on October 17.

Cardus, John, Esq., of Barwell Court, Kingston-on-Thames, to Caroline, eldest surviving daughter of James Part, M.D., of Camden Road Villas, at St. Pancras, on October 23.

Hodgkinson, Fredk., Esq., Assistant-Surgeon Bombay Army, to Frances H., second daughter of the late William H. Hunt, Esq., of Norwood, at Paddington, on October 18.

Morgan, Henry, Esq., of the Goulburn River, Australia, to Lucy E., eldest daughter of Henry Coward, M.D., Carranne, Ceres, Australia, on August 16.

Pain, James, Esq., Camden Cottages, Camden Road, to Jessie, daughter of Robert Davies, Esq., Surgeon, Holborn Hill, at St. Pancras Church, on October 18.

Peck, Ffloyd M., Esq., Surgeon, Grassdale Sale, Australia, to Menie, daughter of Duncan Campbell, Esq., late of Islay, Argyleshire, on August 15.

Stuart, Kenneth B., M.D., Calcutta, to Sarah M., daughter of William Wotherspoon, Esq., of Hillside, at Edinburgh, on October 17.

Sutton, John, Esq., eldest son of John Sutton, Esq., Surgeon, Finsbury, to Rebecca, fourth surviving daughter of James Whitmarsh, Esq., of Honiton, at St. Leonard's, Shoreditch, on October 17.

Turner, Vincent J., Esq., Shipton-on-Cherwell, Oxon, to Agnes E., second daughter of Gilbert F. Girdwood, M.D., of Howley Place, at Paddington, on October 23.

DEATHS.

Adams, Robert E., Esq., Surgeon, at Sevenoaks, aged 54, on October 19.

Johnson. On October 19, at 11, Savile Row, Charlotte Elizabeth, wife of *George Johnson, M.D.

Sloper. On October 2, at Aberdare, aged 30, Margaret, wife of *Richard Sloper, Esq.

Sullivan. On October 16, at Brighton, Catherine, widow of the late Joseph S. Sullivan, Esq., Surgeon Bengal Army.

APPOINTMENTS.

*Wollaston, Robert, M.D., elected Physician to the South Staffordshire Hospital.

HEALTH OF LONDON—OCTOBER 20th, 1860.

[From the Registrar-General's Report.]

	Births.	Deaths.
During week	Boys.. 939 / Girls.. 861	1800 .. 1116
Average of corresponding weeks 1850-9		1576 .. 1122

Among the causes of death were—bronchitis, 86; pneumonia, 103; phthisis, 134; small-pox, 9; scarlatina, 49; measles, 56; diphtheria, 8; hooping-cough, 28. The deaths from pulmonary diseases (exclusive of phthisis) were 211, being 59 above the corrected average.

Barometer:
Highest (Sat.) 29.909; lowest (Tu.) 29·468; mean 29·612.

Thermometer:
In sun—highest (Fri.) 97·7 degs.; lowest (Mon.) 60·0 degs.
In shade—highest (Fri.) 62·0 degs.; lowest (Mon.) 39·5 degs.
Mean—50·0 degrees; difference from mean of 43 yrs. + 0·5 degrees.
Range—during week, 22·5 degrees; mean daily, 13·0 degrees.
Mean humidity of air (*saturation* = 100), 89.
Mean direction of wind, S.W.—Rain in inches, 0·56.

TO CORRESPONDENTS.

Communications have been received from:—Mr. Nathaniel Crisp; Dr. P. H. Williams; Dr. S. W. J. Merriman; Mr. Augustin Prichard; Dr. Lionel Beale; Dr. G. M. Humphry; Mr. Richard Gillard; Mr. I. B. Brown; Dr. Thudichum; Dr. Wollaston; Mr. E. Y. Steele; Dr. William Roberts; Mr. J. Fox; Mr. J. Bromfield; Dr. Skinner; Dr. Copeman; Dr. E. L. Fox; Dr. W. Addison; Mr. Grantham; Mr. H. Ormerod; Dr. W. R. Hill; Mr. R. Bell; Mr. H. Hailey; Mr. C. E. Sloper; and Mr. T. M. Stone.

BOOKS RECEIVED.

[** An Asterisk is prefixed to the Names of Members of the Association.*]

1. Chemistry in its Relations to Physiology and Medicine. By *George E. Day, M.A.Cantab., M.D., F.R.S. With Five Plates, containing numerous engraved Illustrations. London: Baillière. 1860.

ADVERTISEMENTS.

Just published, demy 8vo, price 7s. 6d.

The Pathology and Treatment of VENEREAL DISEASES, comprising the most Recent Doctrines on the Subject. By JOHN HARRISON, F.R.C.S.

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4. Inoculation.
5. Transmission of Infection.
6. Poison of Syphilis.
7. Induced Immunity of the System against new Constitutional Infection.
8. Extinction of Syphilitic Diathesis by Syphilization.
9. Influence of Climate, Age, and Sex.
10. Non-Specific Sores, etc.
11. Gonorrhœa, etc.
12. Discharges from the Urethra.
13. Non-Identity of the Syphilitic Virus.
14. Buboes.
15. Prognosis in Syphilis.

Treatment.
1. General Remarks.
2. Treatment of Chancres.
3. Treatment of Constitutional Symptoms.
4. Syphilis in Infants.
5. Non-Specific Sores, etc.
6. Gonorrhœa, etc.
7. Discharges from the Urethra.
8. Treatment of Buboes.
9. Treatment of Phagedena.
Conclusion.

"The claim to a scientific character which Mr. Harrison puts forward in favour of the subject of Venereal Diseases will be found amply justified by a perusal of this work. It contains much information. To the practitioner, who wants merely a view of the most recent doctrines on the subject, it is not too long; to the student, who wants practical instruction, it is not too short."—*Lancet.*

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